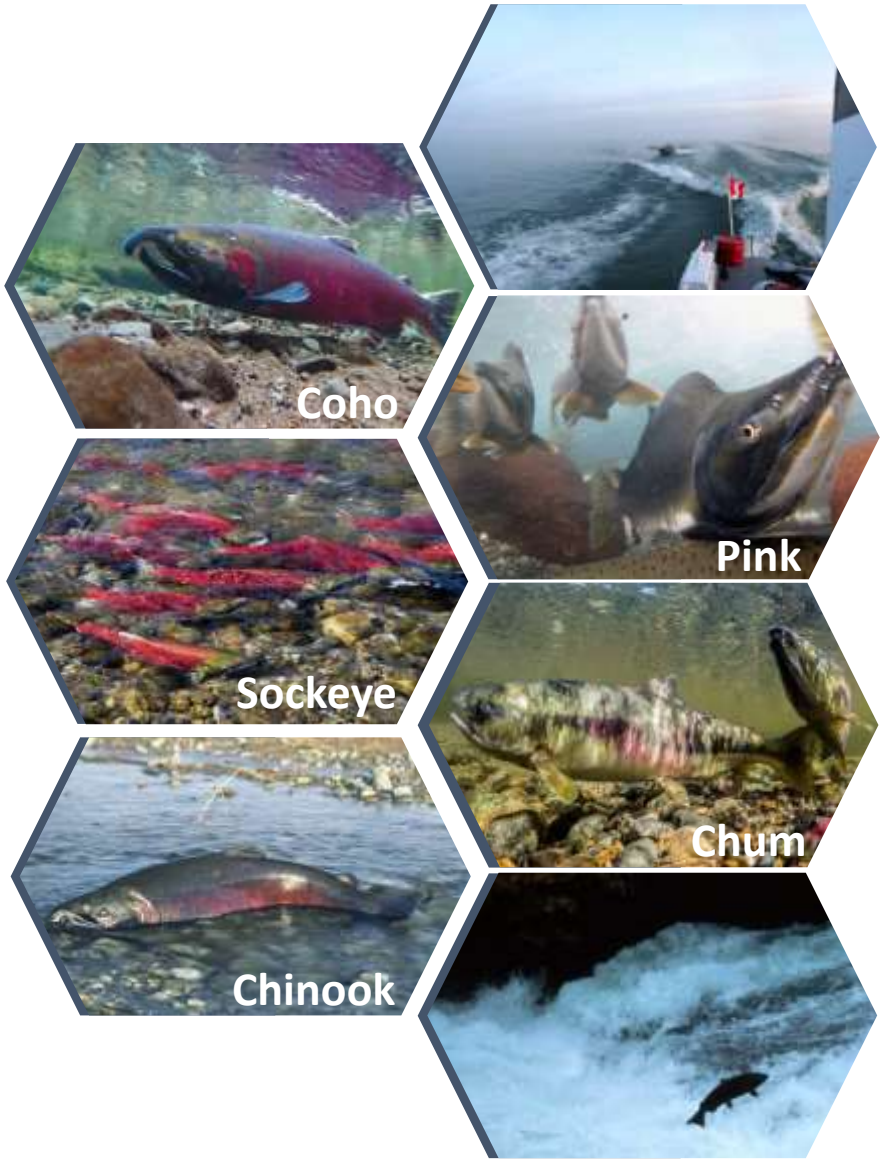
Fisheries and Oceans Canada | Pêches et Océans Canada

Canadian Coast Guard | Garde côtière canadienne

Evaluation of DFO's Activities in Support of Pacific Salmon



Final Report

Project number 96524

May 2022

Evaluation

Canada

Table of Contents

3

Evaluation Context

4 - 9

DFO Context

10 - 36

Evaluation Findings

37 - 41

Conclusions & Recommendations

42 - 52

Annexes:
A. Methodology
B. Policy context
C. Good practices and lessons learned
D. Alternative financial tracking practices
E. Grants and contributions programs
F. Management Action Plan

Evaluation Context

Purpose

- The evaluation examined the relevance, design, delivery and effectiveness of activities related to the management of Pacific salmon. The primary objective of the evaluation is to provide senior management with evidence-based information to help support decision-making and to help with policy development and implementation.

Scope

- The evaluation was conducted by Fisheries and Oceans Canada's (DFO's) Evaluation Division between May 2020 and June 2021. The evaluation covers the period from April 2015 to March 2020 as well as the Yukon Salmon Sub-committee and Pacific Salmon Foundation contribution programs. The scope of the evaluation was established through a planning phase which included consultations with regional staff and senior management (including National Headquarters).

Approach

- The evaluation applied a principles-focused approach[1] to assess the management of Pacific salmon by assuming that DFO's Pacific Region strives to achieve the principle of "healthy and abundant salmon stocks", as identified through document review and interviews.
- In particular, the evaluation assesses the degree to which the principle is guiding, useful, inspiring, developmental and evaluable (G.U.I.D.E) in relation to DFO's habitat, harvest and hatcheries management levers as described on the next page.
  - **Guiding** (prescriptive, directional and effectiveness-oriented);
  - **Useful** (points towards desired results, describes how to be effective, supports decision-making);
  - **Inspiring** (values-based, meaningful);
  - **Developmental** (context sensitive, complexity adaptable, not time-bound); and
  - **Evaluable** (able to document and judge results)

Methodology

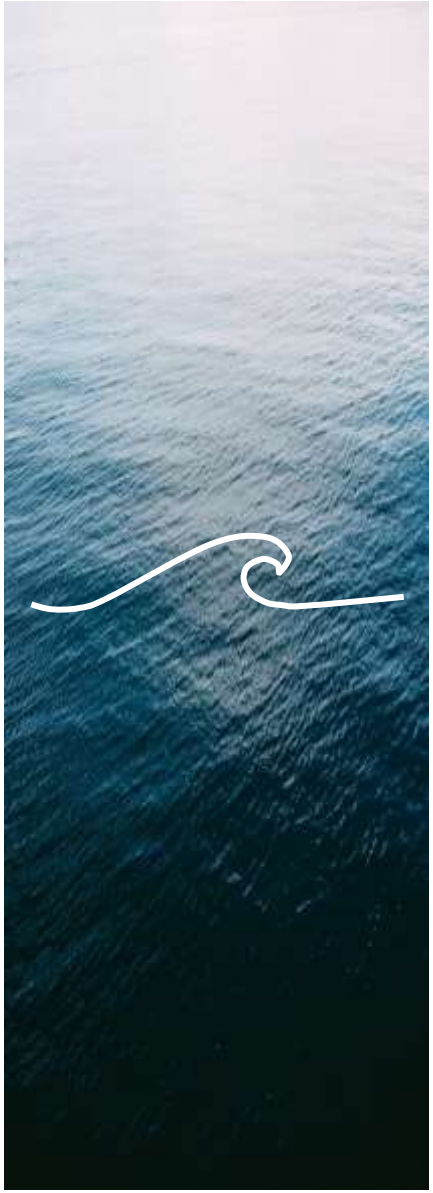
- The evaluation was designed to respond to the questions listed in Table 1. To address the evaluation questions, information was triangulated from multiple lines of evidence including interviews, document and literature review, financial and administrative data analysis, a survey of DFO staff and external stakeholders, and case studies. The evaluation methodologies, limitations and mitigation strategies are discussed in Annex A.

Table 1: Evaluation questions

Relevance	
1	What needs do activities related to Pacific salmon address?
Effectiveness and Efficiency	
2.1	To what extent is there a clear strategic direction and vision for all activities related to Pacific salmon?
2.2	To what extent are the three levers (hatcheries, habitat and harvest) collaborating effectively?
2.3	Are there best practices and lessons learned that could help improve the department's delivery of activities related to Pacific salmon?
2.4	To what extent is the governance structure appropriate to support the management of all activities related to Pacific salmon?
2.5	What are the factors (internal or external to DFO) that have facilitated or hindered DFO's ability to meet its objectives related to Pacific salmon?
2.6	To what extent can the department account for all resources (financial, human, materiel) allocated to activities related to the management of Pacific salmon?
Gender-based Analysis Plus (GBA+)	
3	To what extent have GBA+ considerations been incorporated into the planning and the management of programs related to Pacific salmon?

1. Michael Quinn Patton. 2018. Principles-focused evaluation : the guide. New York, NY : The Guilford Press.

How DFO operates with regard to Pacific Salmon



- As the department of Fisheries and Oceans Canada, Pacific salmon are among the 633 aquatic species managed by DFO in accordance with the departments' broader environmental mandate and legislative framework.

Departmental mandate

- With regards to Pacific salmon, DFO has a departmental mandate to manage Canada's fisheries and safeguard its abundant freshwater and marine and coastal areas by:
  - sustainably managing fisheries and aquaculture;
  - working with fishers, coastal and Indigenous communities to enable their continued prosperity from fish and seafood; and
  - ensuring that Canada's oceans and other aquatic ecosystems are protected from negative impacts;

Enabling Instruments

- Six enabling instruments define DFO's legislative obligations with regards to Pacific Salmon:
  - *Oceans Act*
  - *Fisheries Act*
  - *Species at Risk Act*
  - *Coastal Fisheries Protection Act*
  - *Canada Shipping Act*
  - *Fishing and Recreational Harbours Act*

- To achieve desired departmental outcomes, DFO is structured by programs that align to core departmental responsibilities through DFO's Departmental Results Framework (DRF).

Departmental core responsibilities

- DFO strives to achieve results for Pacific salmon under the following core responsibilities:
  - **Fisheries:** DFO protects and manages Canada's fisheries, including aquaculture, and supports Indigenous participation in fisheries. DFO also ensures Canada's national network of harbours is open and in good repair.
  - **Aquatic ecosystems:** DFO protects Canada's oceans, freshwater and aquatic ecosystems and species from the negative impact of humans and invasive species. DFO achieves this through sound science and in collaboration with Indigenous communities.

Program Inventory Profile

- Under the **Fisheries** and **Aquatic Ecosystems** core responsibilities, DFO administers a number of programs in support of Pacific salmon. These are further described on the next page.
- All DFO programs are defined within Performance Information Profiles (PIPs).

How DFO delivers activities in support of Pacific salmon

- As a fisheries resource, stocks of Pacific salmon play an important role in Canada. DFO's activities in support of Pacific salmon are carried out across a multi-tiered national and regional program structure.

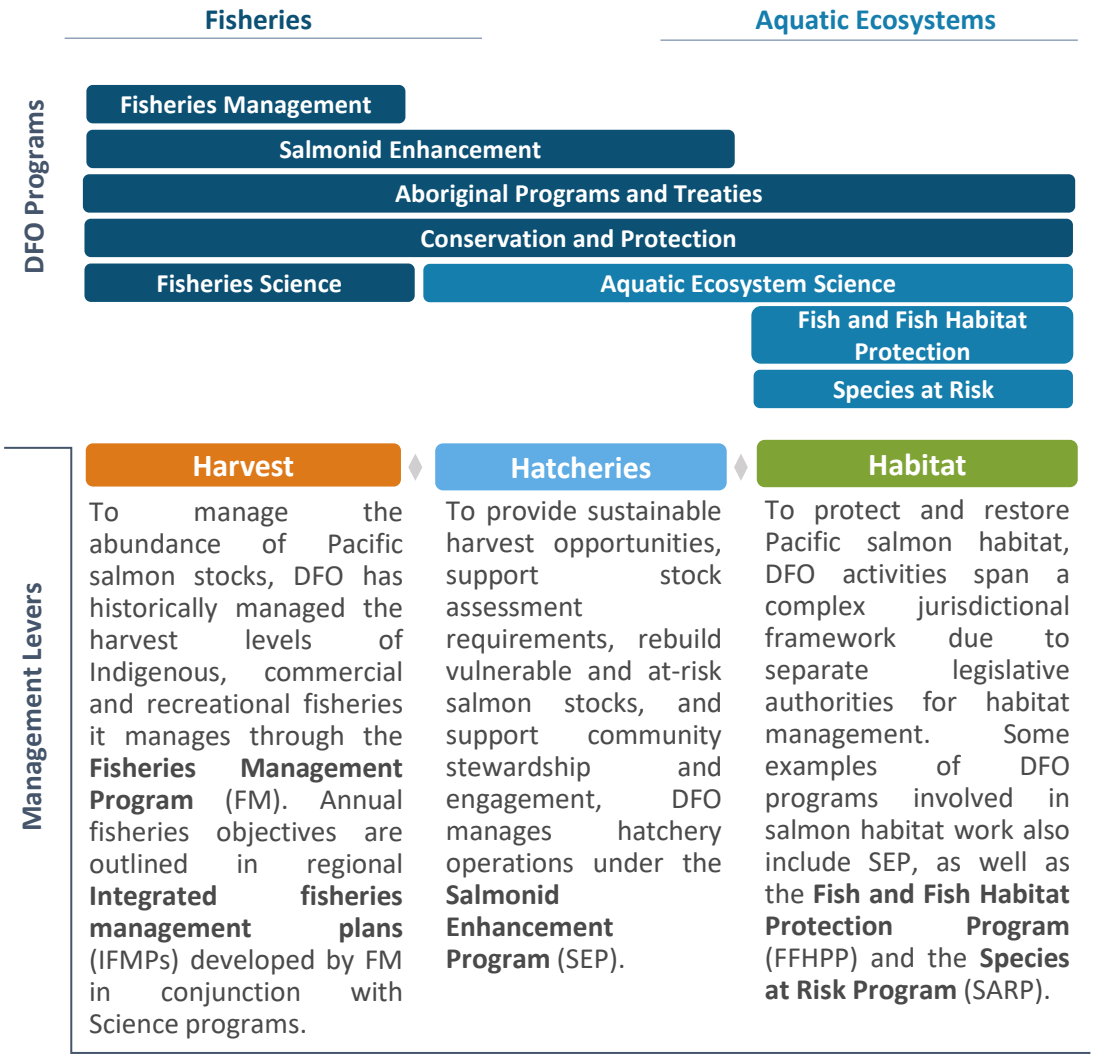
Nationally:

- DFO administers 32 national programs across multiple sectors that define the departments' national activities.

Regionally:

- Activities in support of Pacific salmon are carried out by the regional components of national programs in DFO's Pacific Region. Eight national programs under the Fisheries and Aquatic Ecosystem core responsibilities apply to the management of Pacific salmon within the department.
- Within this operational structure, DFO's activities in support of Pacific salmon are further encompassed and delivered via three management levers which are related to the species' **harvest** (i.e. fisheries management), **hatcheries** (i.e. enhancement for harvest and conservation purposes), and **habitat** (i.e. the restoration and protection of habitat). The three management levers are broadly used within the Pacific Northwest, including in the United States.
- Although the use of these management levers has been overlaid onto DFO's existing operational structure, there is no one sector or program directly responsible for any of these levers. Instead, DFO's management levers are instruments used by the department to deliver on DFO's legislative requirements with regards to Pacific salmon through multiple programs (Figure 1).

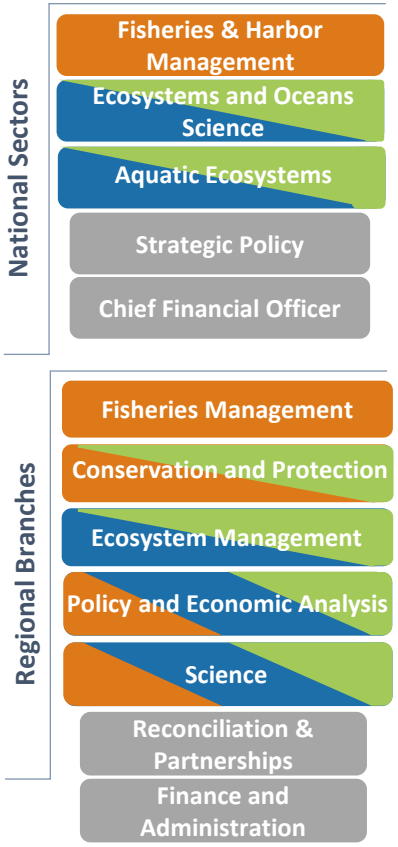
Figure 1. DFO's program structure as related to Pacific salmon harvest, hatcheries and habitat levers



How DFO governs with regards to Pacific salmon

- DFO activities in support of Pacific salmon are also carried out across multiple national sectors. Some sectors are directly involved with activities related to the three management levers while others provide additional support.[2] Within the Pacific Region, sector-level activities are carried out by multiple regional branches, some of which also provide additional support (Figure 2).[3] Within this broader governance structure, issues related to Pacific salmon can be discussed at many levels, such as committees geared to serve national sectors and regional branches.

Figure 2. DFO's governance structure supporting the harvest, hatcheries and habitat levers as well as providing additional support



Nationally, issues related to Pacific salmon can be discussed at the Departmental Management Committee (DMC) should the need arise. The DMC is a DFO senior decision-making body responsible for strategic direction on all matters related to the overall stewardship of DFO's management issues. Additional committees at which issues related to Pacific salmon may be brought forward include:

- **Fisheries Management and Operations Committee**
- **Biodiversity and Ecosystems Management Operating Committee**
- **Programs and Operations Committee**
- **Science Executive Committee**
- **Policy Integration Committee**

Regionally, the Regional Operations and Planning Committee (ROPC) and Regional Management Committee (RMC) may discuss issues related to Pacific salmon. However, it is three senior management committees and a working group that directly support the management of Pacific salmon:

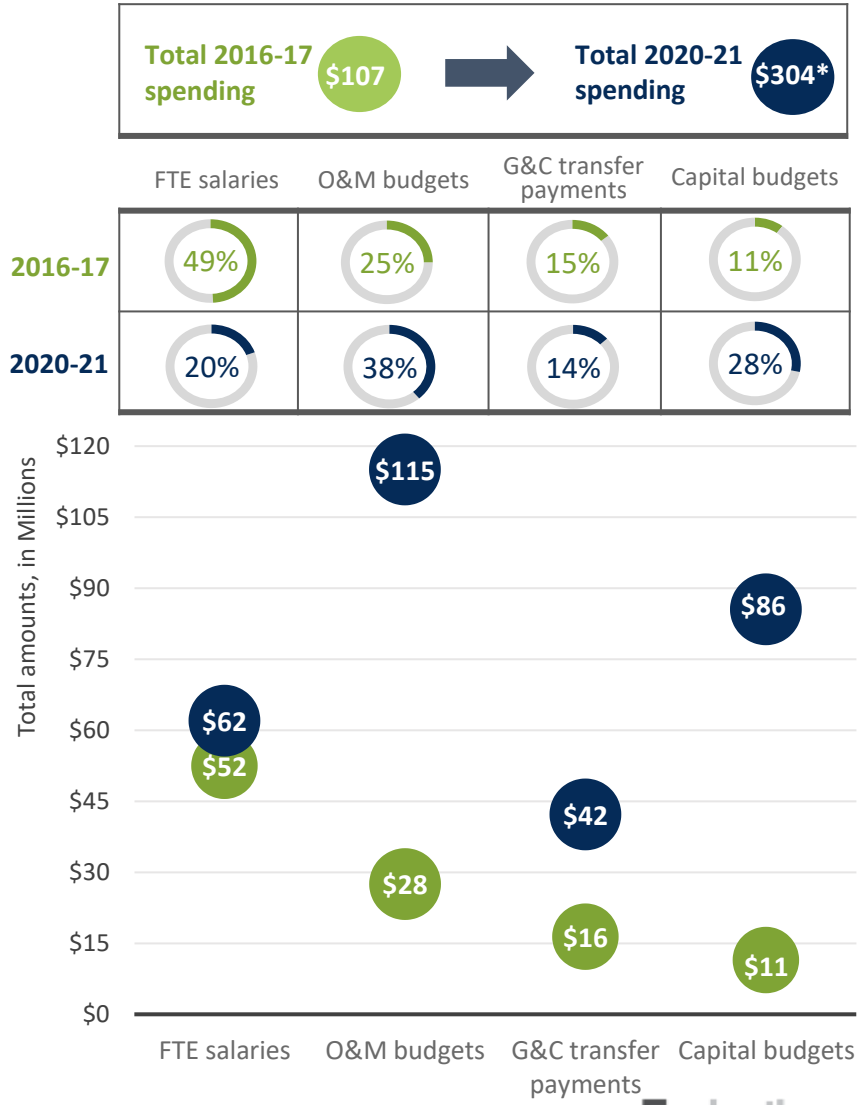
- The Regional Director of **Fisheries Management** chairs the **Strategic Salmon Directors Committee (SSDC).** The SSDC plays an advisory role by providing guidance and direction on Wild Salmon Policy implementation and other strategic issues. *Outcomes are reported to the Regional Director General of the Pacific Region.*
- **Policy and Economic Analysis** chaired the now inactive **Wild Salmon Policy Committee (WSPC).** The WSPC served as the region's forum to facilitate Wild Salmon Policy goals and objectives, including the 2018-2022 Implementation Plan by promoting the coordination of WSP strategies and principles. *The WSPC reported to the SSDC.*
- **Fisheries Management** also chairs the **Salmon Working Group (SWG).** The SWG spans sectors and areas with salmon management responsibilities to coordinate planning and review activities, ensure policy implementation is done on a consistent basis, and inform the SSDC and WSPC. *Both Regional and Area Directors are responsible for implementing SWG recommendations and confirming salmon management priorities.*
- **Science** chairs the **Stock Assessment Coordinating Committee (SACC).** The SACC is the principal forum for salmon stock assessment planning and implementation coordination. Outcomes are reported to the ROPC. *The Regional Director of Science is accountable for Salmon Stock Assessment programming.*

2. Additional support from national sectors is provided by Human Resources and Corporate Services, Governance Secretariat, Internal Audit Directorate and Legal Services Units.
3. Additional support from regional branches is provided by Communication, Real Property, Safety and Security, Access to Information, Human Resources, and IM/IT.

DFO's financial profile with regard to Pacific salmon

- DFO does not track departmental expenditures by species. In light of this, the only way to quantify spending related to Pacific salmon is through a manual compilation of costs with the use of estimates.
- During the scope of the evaluation, this occurred twice. In 2018, DFO commissioned a study to estimate costs allocated to Pacific salmon using actual spending in 2016-17.[4] Likewise, in 2020-21, DFO compiled high-level estimates of Pacific Salmon costs. Costing study elements were defined based on data extracted from DFO's Management Reporting system in consultation with various managers to determine regional spending attributable to Pacific salmon. Across both studies, financial resources in support of pacific salmon were composed of the following elements:
  - **Salary budgets for full-time equivalents (FTEs),** including employees in the various sectors of the Pacific region and national headquarters.
  - **Operations and maintenance (O&M) budgets,** such as laboratory supplies, publishing services, translation, and travel costs;
  - **Grant and contribution (G&C) transfer payments,** which will be further discussed on page 35; and
  - **Capital budgets,** such as trailers for tagging and mass marking, hatcheries and spawning channels.
- Overall, total spending in support of Pacific salmon increased between the two costing studies (Figure 3).
  - **Based on 2016-17 figures,** most spending was allocated to FTE salary budgets (49%), followed by O&M budgets, G&C transfer payments and capital budgets.
  - **Based on 2020-21 total spending,** O&M budgets significantly increased to represented the highest expenditure (51%), followed by FTE salaries, G&C transfer payments and capital budgets.

Figure 3. Financial resources in support of Pacific salmon between 2016-17 and 2020-21



4. Limitations related to the financial analysis can be found in Annex A.
*This includes $154.6M allocated to the Big Bar Landslide in 2020-21.

DFO's financial profile with regard to Pacific salmon

- Based on the 2016-17 costing study, annual spending in the Pacific Region dedicated to Pacific salmon was estimated to be 41% of the region's total spending. Based on the 2020-21 exercise, spending dedicated to Pacific salmon had increased to represent 58% of total regional spending (Figure 4).
- The financial profile of activities in support of Pacific salmon, in the 2016-17 costing study for which financial data was available, was distributed among four **regional management areas** (Figure 5) as well as multiple branches in the Pacific Region (Figure 6). Resources distributed among these branches support Pacific salmon **harvest**, **hatcheries**, and **habitat** management levers.
- Spending related to Pacific salmon continued to support activities across the regional management areas and branches in the Pacific region throughout the scope of the evaluation. However, since resources are not tracked within the department by species, financial data for Pacific salmon spending by management areas and branches was only available based on the manual compilation of costs carried out in 2016-17.

Figure 4. Spending related to Pacific salmon as a proportion of total regional spending.

Figure 5. Spending related to Pacific salmon spans regional management areas (figures from the 2016-17 costing study)

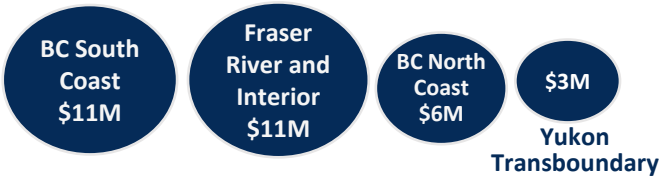
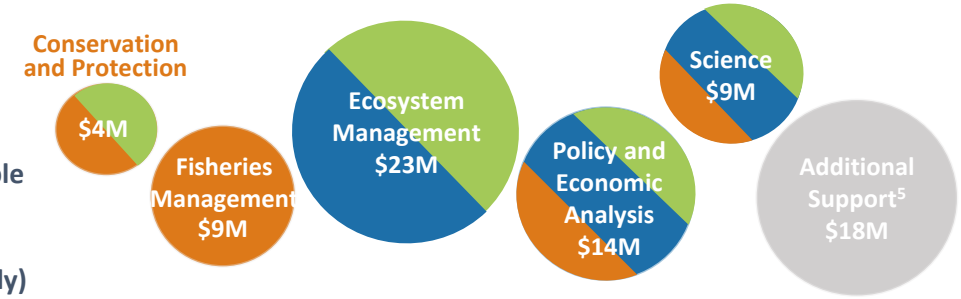


Figure 6. Spending related to Pacific salmon spans multiple regional branches (figures from the 2016-17 costing study)



5. Additional support refers to support received from regional branches such as Finance and Administration, Real Property Safety and Security, Communication, Human Resources, and Information Management/Information Technology branches.

External management of Pacific salmon

Management and jurisdictional responsibility for Pacific salmon is shared across multiple stakeholders

- The management of Pacific salmon is complex. Pacific salmon are a transboundary and highly migratory species that inhabit both freshwater and marine ecosystems and grow to adulthood in the international waters of the North Pacific thereby crossing multiple jurisdictions. As a result, DFO shares jurisdictional responsibility for factors that impact Pacific salmon with multiple partners, such as First Nations (FNs) and provincial or territorial governments.
- The province of British Columbia (B.C.) and Yukon Territory, in particular, have jurisdiction over terrestrial habitat and freshwater fisheries authorities. DFO has authority over marine and freshwater habitat and marine fisheries. Meanwhile, various stakeholders, such as industry and environmental/non-governmental organizations (E/NGOs) share a commitment to conserve and protect wild Pacific salmon stocks, habitats, and ecosystems.
- At the international level, management is shared with United States (U.S.) federal and state departments as established in the Pacific Salmon Treaty. DFO also engages with international partners through Regional Management Fisheries Organizations (RMFOs) which govern the management, conservation and protection of high seas and highly migratory fish stocks (Box 1).

Shared jurisdiction

B.C. | Yukon | First Nations ⇄ **DFO** ⇄ Government of Canada

Shared management

E/NGOs
Fishing and stewardship non-governmental organizations, like the Pacific Salmon Foundation (PSF), are actively involved in Pacific salmon management through a variety of avenues such as habitat restoration and small scale enhancement.

Industry and Associations
Recreational fisheries groups are concerned with recent fisheries closures, advocating instead for selective fisheries and increased hatchery production to support recreational harvests. DFO receives formal advice and recommendations on matters relating to tidal and non-tidal sea run fisheries from the Sport Fishing Advisory Board (SFAB).

Commercial fisheries groups, including harvesters from most major fisheries and processors, are also concerned with the economic state of the Pacific salmon fishery. To address the impact of limited fishing seasons, DFO is working on disaster relief for salmon harvesters through a Salmon Industry Working Group.

U.S. Government
Canada and the U.S. cooperate bilaterally to implement the Pacific Salmon Treaty (PST) through the Pacific Salmon Commission. The PST commits parties to work on science, stock assessment, salmon enhancement, as well as conservation and harvest sharing arrangements organized by geographic area and/or salmon species.

Box 1. Management in the North Pacific

Canada, along with other nations, manages fisheries within an **Exclusive Economic Zone (EEZ)** defined as beyond and adjacent to the 200 nautical mile distance from the nearest point of the baseline of the nation's territorial seas.[6]

Beyond Canada's EEZ in the North Pacific, salmon are managed by the **North Pacific Anadromous Fish Commission (NPAFC)**, a multilateral organization that promotes the conservation of anadromous stocks in the north pacific, including Pacific salmon, within its convention area (Figure 7).[7] Signatories include Canada, Japan, the Republic of Korea, the Russian Federation and the United States of America.

Figure 7. North Pacific Anadromous Fish Commission Convention Area

6. Government of Canada. 2020. *Oceans Act*.
7. North Pacific Anadromous Fish Commission. n.d. *The North Pacific Anadromous Fish Commission (NPAFC).*

Evaluation Findings

Activities in support of Pacific salmon address ongoing needs

Finding: Salmon is integrally important to communities in Canada's Pacific Region. Due to the decline of various salmon stocks, there is an ongoing need to manage Pacific salmon under DFO's legal authority and mandate to ensure their protection, sustainable use, and management in accordance with existing Aboriginal and treaty rights.

Pacific salmon is socially, culturally, and economically important to Canadians

- DFO manages Pacific salmon species including Sockeye, Chinook, Pink, Chum and Coho (Figure 8) that are particularly important to Indigenous communities and also have an impact on commercial and recreational fisheries.

Indigenous communities:

- There are approximately 200 First Nations in BC and Yukon, many of which traditionally fish salmon for food, social and ceremonial (FSC) purposes.[8,9] Pacific salmon are inextricably linked to Indigenous communities, not only as a traditional food source, but also as a vital component of well-being with nutritional, spiritual, cultural, social, and economic elements. These elements arise from the multitude of ways that salmon relates to the lives of Indigenous Peoples and are further described on page 26.

Commercial fisheries:

- Harvest, processing, and export activities related to commercial fisheries are an important part of B.C.'s economy as well as throughout the Pacific Northwest. Between 2012 and 2015, the commercial salmon industry created an average of $273M USD in annual gross domestic product (GDP) and generated 4,410 jobs.[10]

Recreational fisheries:

- Pacific salmon support a robust recreational fishing and tourism sector in B.C., where over 300,000 licences are issued annually.[11] Between 2012 and 2015, the recreational salmon industry generated on average 7,960 jobs an created an average of $577M USD in GDP.[12]

Figure 8. Species of Pacific salmon

8. https://www.welcomebc.ca/
9. https://yukon.ca/en/about-yukon-first-nations
10. https://gunnarknappdotcom2.files.wordpress.com/2019/01/gunnar-knapp-2017-07-economic-impacts-of-pacific-salmon-fisheries-with-gordon-giaslason-et-al.pdf
11. https://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/stats-eng.html#psf
12. https://gunnarknappdotcom2.files.wordpress.com/2019/01/gunnar-knapp-2017-07-economic-impacts-of-pacific-salmon-fisheries-with-gordon-giaslason-et-al.pdf

Activities in support of Pacific salmon address ongoing needs

DFO has the legal authority and mandate for Pacific salmon

- Within the Government of Canada (GoC), DFO has the legislative authority and accountability for the protection and sustainable use of fisheries resources and their habitat.
- As per the department's broader mandate, there is also an ongoing need to address Pacific Salmon in accordance with DFO's overarching core responsibilities. Pacific salmon programming throughout the department is geared towards the following results related to the Fisheries and Aquatic Ecosystems core responsibilities*:

Fisheries

- Canadian fisheries are sustainably managed
- Canadian aquaculture is sustainably managed
- The commercial fishing industry has access to safe harbours
- Fisheries, oceans and other aquatic ecosystems are protected from unlawful exploitation and interference
- Scientific information on fisheries resources is available to inform management decisions

Aquatic Ecosystems

- Negative impacts on Canada's oceans and other aquatic ecosystems are minimized or avoided
- Scientific information on Canada's oceans and other aquatic ecosystems is available to inform management decisions
- Enhanced relationships with, involvement of, and outcomes for indigenous people

Pacific salmon are managed in accordance with existing Aboriginal and Treaty rights

- Through section 35 of the *Constitution Act (1982)*, DFO is likewise accountable for upholding a number of existing Aboriginal and Treaty rights that have shaped the legal context for the management of Pacific salmon:
  - In **R. v. Sparrow (1990)** the Supreme Court of Canada held that the recognition and affirmation of existing Aboriginal rights in the *Constitution Act*, 1982 means that any infringement of such rights must be justified. As a result, DFO is committed to managing fisheries such that Aboriginal fishing for food, social and ceremonial (FSC) purposes has priority over other fisheries.
  - In **Haida v. BC (2004)**, the Supreme Court of Canada concluded that the Crown has a legal duty to consult with Aboriginal groups, and depending on the strength of the claim of rights or title, accommodate their interests when the Crown has knowledge that a decision might adversely affect the Aboriginal right or title. The scope of duty will vary depending on circumstances.

*Some Pacific salmon programming support both Fisheries and Aquatic Ecosystems core responsibilities, such as Conservation and Protection or Aboriginal Programs and Treaties. See page 5 for more details.

Activities in support of Pacific salmon address ongoing needs

There is an ongoing need to manage Pacific salmon stocks in decline

- To survive and prosper, Pacific salmon require appropriate freshwater and marine habitat along their entire species' range. Increasingly, concerns have been raised due to declining trends in many populations of Pacific salmon. The declines are unprecedented, with many populations declining to historic low levels at various rates across geography and sub-populations.[13] For instance:
  - Chinook salmon abundances are declining throughout their B.C and Yukon range;
  - many Sockeye and Coho population abundances are declining in southern latitudes; and
  - some populations of Pink and Chum are doing poor, although generally better than other salmon species throughout their ranges.
- Most **DFO staff** indicate that the management of Pacific salmon is addressing an ongoing need (Figure 9).
- Pacific salmon fisheries are diverse due to the unique ecology of the species as an anadromous fish that migrate up rivers from the sea to spawn. Marine fisheries, such as the Strait of Georgia and Strait of Juan de Fuca are composed of mixed stocks while terminal fisheries, such as rivers that lead up to specific hatcheries, are composed of specific known-stocks (Figure 10).
- Moreover, these trends are expected to continue. In response, certain stocks of Pacific salmon throughout B.C. have been designated as at-risk (endangered, threatened or special concern) by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), making them eligible for consideration under the *Species at Risk Act.*

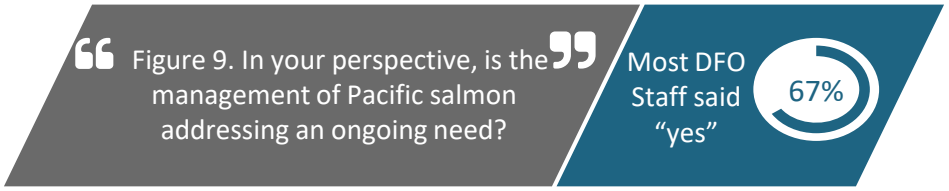
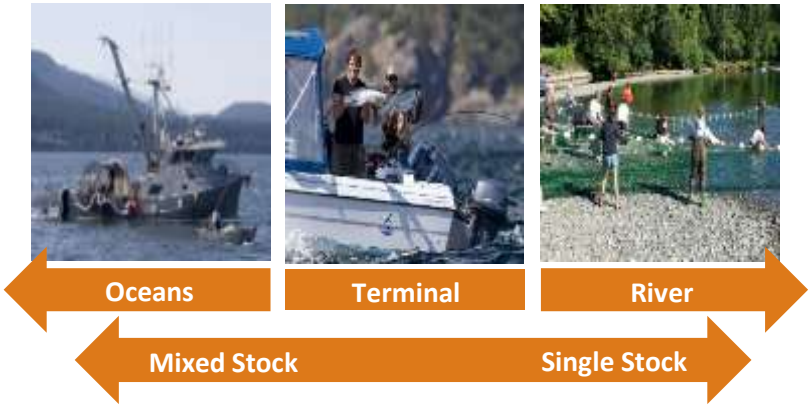


Figure 10. Pacific salmon fisheries are diverse



- Pacific salmon stocks have historically returned in a predictable pattern. However, more salmon populations have been exhibiting negative trends in recent years[13] which continues to place pressures on the First Nations, commercial, and recreational harvesters that depend on the resource.
- Recent conservation measures taken by DFO related to harvesting, such as announcing the closure of significant fisheries[14], further exacerbate the socio-economic pressures stemming from the declining economic viability of Pacific salmon. Further management of Pacific salmon stocks is needed to address:
  - cultural changes within Indigenous communities;
  - reduced economic returns to commercial fisheries; and
  - increasing number of stakeholder requests for private enhancement.

13. DFO. 2019. State of the Canadian Pacific Salmon: Responses to changing climate and habitats. Technical Report
14. https://www.pac.dfo-mpo.gc.ca/fm-gp/salmon-saumon/comm-closures-fermatures-eng.html

Activities in support of Pacific salmon are aligned with GoC priorities

Pacific salmon management is aligned with DFO and Government of Canada priorities

- DFO's activities in support of Pacific salmon are aligned with GoC priorities , as outlined in the Minister of Fisheries and Oceans Canada's Mandate Letters from 2015 to present. Mandate letter commitments include working in close collaboration with relevant ministers, as well as with FNs, provincial and territorial authorities, to act on recommendation of the Cohen Commission on restoring sockeye salmon stocks in the Fraser River and using good scientific evidence and traditional Indigenous knowledge when making decisions affecting fish stocks and ecosystem management.
- Management activities for Pacific salmon are also linked to a number of broader **GoC** and **Pacific Region** priorities:

Fisheries Act Changes Implementation

In 2019, the GoC legislated Bill-C68 Amendments to the *Fisheries Act* to **improve the protection of fisheries and their ecosystems** through new provisions that will better support the sustainability of Canada's marine resources for future generations.

Reconciliation

The GoC is committed to advancing relationships with Indigenous Peoples based on a **recognition of rights, respect, cooperation, and partnership**. DFO implements Treaty rights related to fisheries, oceans and aquatic habitat consistent with section 35 of the *Constitution Act* (1982), the United Nations Declaration on the Rights of Indigenous Peoples, and the federal Principles Respecting the Government of Canada's Relationship with Indigenous Peoples.

Protecting Oceans

Combating global IUU fishing was identified as a priority at the 2018 G7 Leaders summit. Deterring IUU fishing compliments federal priorities, such as **marine pollution prevention** and **jettisoning of garbage** and **ghost gear** into the marine environment.

Pacific Salmon Treaty (PST) Renewal

Signed by Canada and the U.S. in 1985, the PST provides a framework through which both countries work together to conserve and manage Pacific salmon. The Treaty includes commitments by both countries to **prevent over-fishing and provide optimum production.**

Response to the Cohen Report

Canada established the Cohen Commission in 2009 to inquire into the **decline of sockeye salmon in the Fraser River** and provide recommendations. The final report includes 75 recommendations on a range of issues.

Wild Salmon Policy (WSP)

Canada's Wild Salmon Policy is DFO's **cornerstone response to the Cohen recommendations**. The WSP aims to restore and maintain healthy and diverse salmon populations and their habitat for the benefit and enjoyment of the people of Canada in perpetuity.

Southern Resident Killer Whale (SRKW) Initiative

In 2003, the SRKW population was listed as endangered under the federal *Species at Risk Act*. SKRW population declines are a result of three key threats: acoustic disturbance; contaminants; and **low availability of their preferred prey, Chinook salmon.**

The principle of "healthy and abundant salmon stocks" does not provide consistent guidance in the management of Pacific salmon stocks across the three management levers

Finding: The principle of "healthy and abundant salmon stocks" does not provide consistent guidance to drive Pacific salmon management across the three management levers. As a result, clarity in guidance may differ by species of Pacific salmon and different Pacific salmon activities.

GUIDING
Prescriptive, directional and effectiveness-oriented

2 USEFUL

3 INSPIRING

4 DEVELOPMENTAL

5 EVALUABLE

Under the "Guiding" category of the principle focused evaluation approach the evaluation explored the extent to which there is a clear strategic direction and vision for all activities in support of Pacific salmon. This means the evaluation assessed whether the principle is prescriptive, directional and effectiveness-oriented.

The evaluation found that the principle of "healthy and abundant salmon stocks" is subject to interpretation and does not provide consistent guidance for the management of Pacific salmon

- Most **DFO staff** and some **external survey respondents**[15] indicated the principle provides sufficient guidance from **a small** to **some extent** (Figure 11). Moreover, a few respondents indicated it wasn't at all providing sufficient guidance.
- DFO staff also indicated that the terms 'healthy' and 'abundant' are themselves subject to interpretation.
- Likewise, external partners and stakeholders stated that they understood the principle of "healthy and abundant salmon stocks" to a **small** or **moderate extent**, meaning there may be diverse understandings among external partners of what constitutes healthy and abundant salmon stocks.

"Figure 11. In your perspective, to what extent is the principle of **healthy and abundant salmon stocks** providing sufficient guidance for the management of Pacific salmon?"

Most DFO staff said from a small to some extent — 59%

Some external respondents said from a small to some extent — 41%

15. External survey respondents include partners, such as Indigenous and Coastal communities, as well as external stakeholders such as provincial and municipal governments, academia, industry, NGOs etc.

The principle of "healthy and abundant salmon stocks" does not provide consistent guidance in the management of Pacific salmon stocks across the three management levers

GUIDING
Prescriptive, directional and effectiveness-oriented

2 USEFUL

3 INSPIRING

4 DEVELOPMENTAL

5 EVALUABLE

Guidance for the management of Pacific salmon may differ by species and by activity. The department could benefit from a clearer direction and vision.

- A majority of **DFO staff** and **external survey respondents** agreed that DFO could improve its strategic direction and vision regarding the management of Pacific salmon (Figure 12).
- Interviewees also indicated that the direction for the management of Pacific salmon can differ by species, which could be improved by a clear strategic direction and vision. For instance, activities related to Chinook salmon are linked through the Chinook Strategic Planning Initiative whereas activities related to ecosystem-level recovery planning and salmon enhancement projects require strategic frameworks.
- The evaluation found that DFO's vision and direction for Pacific salmon is driven by various regional and GoC priorities, as well as an evolving policy context. The management of Pacific salmon is governed by multiple different, yet overlapping, legislative frameworks. Core salmon policy frameworks date back to mid-1990 and are further discussed in Annex B.
- While some policies and legislative frameworks are specific to Pacific salmon, such as the Pacific Salmon Treaty, others apply to all aquatic species managed by the department (i.e. the Species at Risk Act (SARA)). A number are either due to be reviewed, such as the 1999 Salmon Allocation Policy, or have recently been subject to review (i.e. the 2005 Wild Salmon Policy and Bill C-68 amendments to the Fisheries Act (1985)). Box 2 highlights the multiple overlapping units of assessment used by DFO in response to this evolving policy context which may have contributed to different directions and visions for the management of Pacific salmon.

Figure 12. In your perspective, can the strategic direction and vision regarding Pacific salmon be improved?

Box 2. Various units of assessment group stocks of Pacific salmon for various management purposes

Conservation Units (CUs) are groups of wild Pacific salmon sufficiently isolated from other groups that, if extirpated, are very unlikely to re-establish naturally within an acceptable time frame. CUs define WSP habitat objectives.

Stock Management Units (SMUs) are groups of CUs combined for the purposes of stock assessment and fisheries management. SMUs define Bill C-68 objectives related to Fish Stock Provisions.

Designatable Units (DUs) are discrete and evolutionary significant units of a species used for COSEWIC assessments and which can align with the definitions of a CU.

Management Units (MUs) define fisheries management objectives related to the harvest lever.

Outlook Units (OUs) define Salmon Outlook objectives for generating science advice related to harvest opportunities.

The principle of "healthy and abundant salmon stocks" does not provide consistent guidance in the management of Pacific salmon stocks across the three management levers

GUIDING
Prescriptive, directional and effectiveness-oriented

2 USEFUL

3 INSPIRING

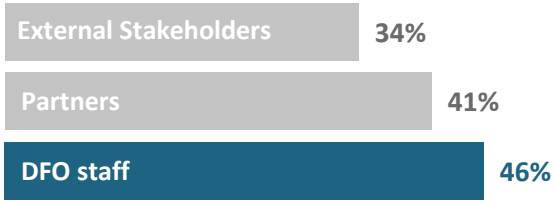
4 DEVELOPMENTAL

5 EVALUABLE

Communication of DFO's direction and vision for Pacific salmon could be improved within and outside the department.

- Overall, some **DFO staff** and most **external survey respondents** indicated that DFO does not keep them informed of a strategic direction and vision for Pacific salmon (Figure 13).
- Among survey respondents, DFO staff, partners and external stakeholders were kept informed of DFO's strategic direction and vision for the management of Pacific salmon to varying degrees, with DFO staff being the most informed (Figure 14).
- Furthermore, the evaluation found that more working level staff indicated that the department needs clearer direction and vision for Pacific salmon compared with senior managers. This indicates that internal communication with regards to Pacific salmon priorities can be improved within the department.

Figure 14. **DFO staff are most** informed, followed by partners and external stakeholders.



There is a need for increased engagement to improve the communication of DFO's strategic vision for Pacific salmon

- Various communication methods are used to keep groups informed of DFO's strategic vision including press releases, submission of official documents, media/social media, and fisheries notices. The most frequently used are e-mails to DFO staff and meetings with external stakeholders.

Moving forward, DFO will implement a new Pacific Salmon Strategy Initiative (PSSI).[16]

- The PSSI was announced on June 8, 2021 to guide a strategic, coordinated, and long-term response rooted in collaborative action. It aims to stop the steep decline of many Pacific salmon populations and to protect and rebuild stocks where possible by implementing a series of immediate and long-term solutions.
- The PSSI recognizes that strong partnerships are key to successful outcomes and will implement new engagement and consultation mechanisms implemented so that, working together, better outcomes for Pacific salmon, salmon habitat, and ecosystems will be realized.

16. https://www.dfo-mpo.gc.ca/campaign-campagne/pss-ssp/conservation-eng.html

Roles and responsibilities related to Pacific salmon activities could be improved at the departmental level

Finding: Roles and responsibilities with regard to Pacific salmon are clear within branches and programs but not across other areas of the department due, in part, to unclear accountabilities associated with a need for a clearer direction and vision.

1 GUIDING

USEFUL
Points towards desired results, describes how to be effective, supports decision-making

3 INSPIRING

4 DEVELOPMENTAL

5 EVALUABLE

The evaluation focused on issues surrounding governance, roles and responsibilities. This falls under the "Useful" category of the principle focused evaluation approach, meaning the evaluation assessed whether the principle points towards results, describes how to be effective and supports decision-making.

Overall, roles and responsibilities related to Pacific salmon are clear at the branch and program level, but could be improved at the departmental level

- Overall, the evaluation found that roles and responsibilities with regard to Pacific salmon are clear within the various program siloes along which Pacific salmon activities take place. Most **DFO interviewees** are clear on their roles and responsibilities regarding Pacific salmon.
- However, limitations remain due to the fact that roles and responsibilities are generally well-defined within individual branches and programs but do not form part of a single unified plan for the department, such as the Wild Salmon Policy Implementation Plan.
- Roles and responsibilities are not clear across other areas of the department due, in part, to unclear accountabilities associated with a lack of clear direction and vision for the management of Pacific salmon. As a result, regional program components that carry out activities in support of Pacific salmon do not communicate with their national program counterparts or across programs at the national level.

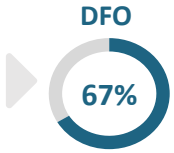
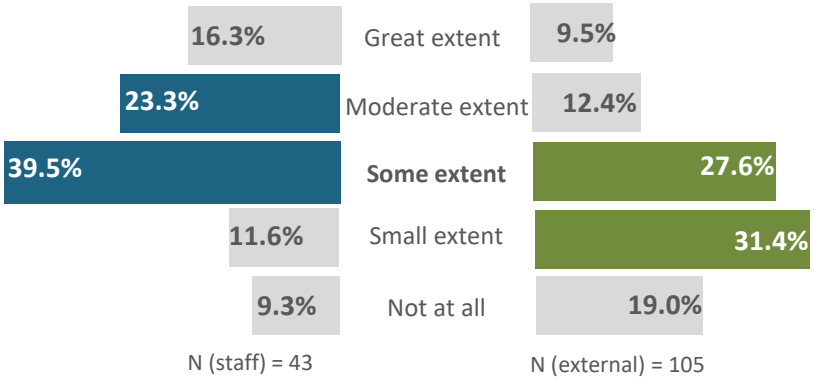


Figure 15. When asked to what extent are roles and responsibilities regarding the management of Pacific salmon clearly defined, **DFO staff** rated the extent to which roles and responsibilities are clearly defined higher than **external survey respondents**.



Roles and responsibilities related to Pacific salmon activities could be improved at the departmental level

1 GUIDING

USEFUL
Points towards desired results, describes how to be effective, supports decision-making

3 INSPIRING

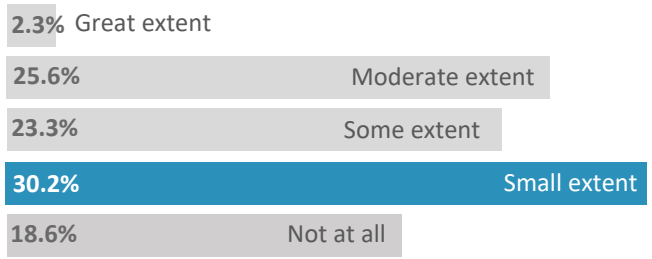
4 DEVELOPMENTAL

5 EVALUABLE

Governance frameworks lack clarity within the region and across the department

- At the regional and departmental level, unclear accountabilities for Pacific salmon programming have resulted in activities being driven by crisis or interest rather than being reflected in branch, program and area plans (such as strategic plans, work plans, and other internal documents). As a result, habitat, hatcheries and harvest activities in support of Pacific salmon often stem from different areas of the department and from multiple decision making processes.
- The evaluation found that accountabilities for the management of Pacific salmon are not necessarily aligned with existing accountabilities within the department. This is due, in part, to the broader operational context within which DFO operates wherein governance frameworks are not geared to be species-specific. Rather, it is the broader departmental context that drives governance around Pacific salmon issues. Therefore while responsibilities for Pacific salmon lie with the RDG, Pacific Region, other areas of the department also play a vital role in the management of Pacific salmon as depicted in the WSP Implementation Plan (Box 3).
- DFO staff rated the governance structure supporting Pacific salmon activities as being appropriate from a small to some extent (Figure 16). A number of improvements were noted that may help clearly define roles and responsibilities for the management of Pacific salmon:
    - reviewing the governance structure and organizational structure;
    - reviewing management plans;
    - identifying clear accountabilities; and
    - reviewing existing committee structures.

Figure 16. When asked to what extent is the governance structure in place appropriate to support the management of all activities related to Pacific salmon, some DFO staff rated it **to a small extent.**



Box 3. Canada's Policy for the Conservation of Wild Pacific salmon

The **Wild Salmon Policy – 2018-2022 Implementation Plan** (WSP-IP) was adopted to consolidate actions in support of Pacific salmon that are outlined in the WSP; for this reason the WSP-IP captures and consolidates many activities within the department, such as the Pacific Salmon Treaty (PST), Aboriginal Fisheries Strategy (AFS), Aquaculture, Salmonid Enhancement Program (SEP), and potential considerations under the *Species at Risk Act* (SARA) as needed.

While the WSP-IP has been in place since 2017, interviewees noted a lack of accountability in the implementation plan. New legislation, such as the 2019 amendments to the *Fisheries Act*, have also changed the context for Pacific salmon management and created confusion with regards to Pacific salmon accountabilities within the department.

Pacific salmon management levers would benefit from improved collaboration

Finding: The alignment, integration, collaboration and communication between DFO's harvest, hatcheries and habitat management levers can be improved to support healthy and abundant salmon stocks.

1 GUIDING

USEFUL
Points towards desired results, describes how to be effective, supports decision-making

3 INSPIRING

4 DEVELOPMENTAL

5 EVALUABLE

There is a need to improve the alignment, integration, collaboration and communication between those implementing Pacific salmon management levers.

- The **harvest,** **hatcheries** and **habitat** management levers act as the instruments through which DFO achieves results for Pacific salmon based on their influence over factors affecting the species.
- The three levers are not mutually exclusive. In order to advance the Department's overall priorities and outcomes for Pacific salmon, the harvest, habitat and hatcheries levers must work collaboratively based on aligned priorities. However, the management of Pacific salmon within DFO is highly complex, cutting across multiple branches and numerous regional programs.
- Overall, the evaluation found that Pacific Region activities across the three management levers are siloed, not aligned to strategic priorities, and lack coordination and integration, for instance, across Pacific Region's management areas.
- The evaluation also found evidence of greater consideration towards harvest management activities than towards the other management levers. In contrast, management activities related to Pacific salmon habitat tend to be the most disconnected from the remaining levers.

Collaboration

DFO staff and external partners indicated an overall lack of collaboration between the three levers.

When survey respondents were asked to what extent is there collaboration between the management levers, collaboration between **hatcheries** and **harvest** was rated the highest, potentially because hatcheries' production objectives support harvest activities, while **habitat** and **harvest** was rated the weakest.

Hatcheries
55% said from a small to a moderate extent

Harvest

Habitat
62% said from not at all to a small extent.

DFO 40%

Some staff suggested that an **ecosystem-based management (EBM) approach** to management would help increase collaboration between the three levers.

An EBM approach ensures that linkages among key ecosystem components are considered when identifying, establishing, planning and managing DFO's various responsibilities.[17]

Alignment

DFO's management levers are not clearly aligned.
Again, clear alignment is perceived as strongest between **harvest** and **hatcheries** levers and weakest between **harvest** and **habitat**.

- Interviewees agree the alignment of objectives and priorities is affected by variables that can differ across the three levers, such as independent decision-making frameworks, jurisdictional limitations, and management timelines.

17. https://www.dfo-mpo.gc.ca/oceans/networks-reseaux/principles-principes-eng.html

Pacific salmon management levers would benefit from improved collaboration

1 GUIDING

USEFUL
Points towards desired results, describes how to be effective, supports decision-making

3 INSPIRING

4 DEVELOPMENTAL

5 EVALUABLE

Communication between the three management levers can be improved

- Avenues for the communication of work happening across harvest, habitat and hatcheries levers include: regional committees geared towards Pacific salmon, internal briefing notes and parliamentary standing committees (Box 4).
- For instance, communication occurs across Pacific salmon committees whose membership includes various regional branches and areas. However, discussions tend to focus on decisions related to harvest. Further engagement with programs related to habitat and hatcheries activities is needed.
- As well, internal briefing notes support decision-making by communicating information across the three levers. However, information is mostly shared in relation to GoC priorities. For example, Pacific salmon issues related to the SRKW Initiative may include considerations of salmon enhancement and habitat protection and restoration.
- A few DFO staff indicated that evidence-based planning, clear and consolidated leadership, and the development of priorities to establish a framework would help increase communication between the three levers.

Communication

DFO staff indicated the need for better communication between the three levers (Figure 17).

Interviewees also indicated the degree to which DFO's strategic direction and vision is communicated within the department differs by lever and organizational position.

DFO

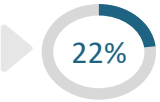
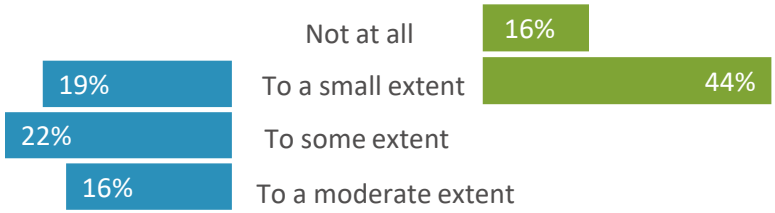


Figure 17. When survey respondents were asked to what extent is there clear communication between the following levers, communication was rated **strongest between the hatcheries and harvest** levers and **weakest between habitat and harvest**.



Box 4. Feedback from parliamentary standing committees

DFO's need for improved communication and integration in the management of Pacific salmon has been raised by First Nations as well as stakeholders and partners including provincial/territorial governments and E/NGOs. Recent statements by witnesses on the State of Pacific Salmon at the July 2020 Standing Committee on Fisheries and Oceans (FOPO) highlighted the need for integration to **support the ability to work across branches and departments to align priorities with Pacific salmon.**

Witnesses noted that no one party has the knowledge or the resources to address Pacific salmon management issues on their own, therefore integration is needed at the federal level.

Pacific salmon management levers would benefit from improved collaboration

1 GUIDING

USEFUL
Points towards desired results, describes how to be effective, supports decision-making

3 INSPIRING

4 DEVELOPMENTAL

5 EVALUABLE

Integration

DFO has struggled to integrate multiple program-based salmon work plans across the three levers.

- Salmon programming is multi-faceted, spanning across several branches and programs that are not aligned and lack an overarching framework linking them to salmon objectives.
- The evaluation found that habitat activities are perceived as the least integrated, followed by hatcheries and harvest.
- **Working level staff** indicated that internal integration is a gap that should be addressed to provide guidance for the many aspects of Pacific salmon management.

DFO

Moving forward, DFO's PSSI will focus on 4 key areas, one of which is specific to integrated management and collaboration[18]:

- conservation and stewardship;
- enhanced hatchery production;
- harvest transformation; and
- **integrated management and collaboration.**

Sockeye Salmon Run in Adams River, BC

18. https://www.dfo-mpo.gc.ca/campaign-campagne/pss-ssp/conservation-eng.html

Financial information by lever

Finding: DFO tends to focus more on the harvest management lever as a result of the department's broader mandate. However, in the case of Pacific salmon, all three management levers need to be acted upon.

1 GUIDING

USEFUL
Points towards desired results, describes how to be effective, supports decision-making

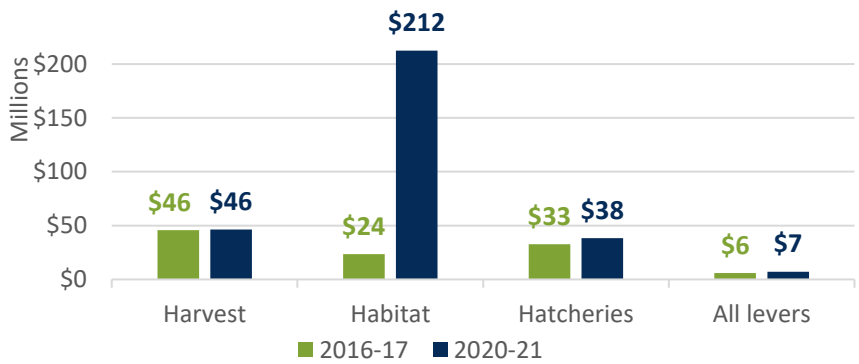
3 INSPIRING

4 DEVELOPMENTAL

5 EVALUABLE

The unique ecology of Pacific salmon as a species adds to management complexity that requires actions across the habitat, harvest and hatcheries levers.

- As a department, DFO historically manages fisheries through the use of harvest management actions as a result of the department's broader mandate and regulatory frameworks (Box 5). This means DFO has, in the past, focused more on the harvest management levers than habitat and hatcheries. In fact, many aquatic species such as Atlantic cod, are managed by the department solely on the basis of harvest measures. However, Pacific salmon are unique in that the various management levers have influence over the different stages of a Pacific salmon's complex lifecycle and migration runs. Therefore, activities in support of Pacific salmon need to focus on all three levers. As an approach, this does not necessarily align with DFO's traditional approach to fisheries management.
- The evaluation found evidence of greater consideration towards harvest management activities than towards the other management levers, such as increased financial support for harvest based on 2016-17 actual spending. In contrast, 2020-21 spending is more reflective of the need to focus on the other management levers, in particular the habitat lever (Figure 18).



Box 5. The influence of DFO's regulatory frameworks

- It is noteworthy that most policies affecting the management of Pacific salmon are not species-specific. For instance, DFO's ecosystem-based management approach ensures linkages among multiple key ecosystem components.
- DFO's broader legislative framework is what prescribes the management actions taken by the department. Therefore DFO's management actions have had to evolve alongside changes to foundational enabling instruments. For instance, DFO's jurisdiction over factors influencing Pacific salmon habitat has evolved in response to 2012 changes to the Fisheries Act which challenged the department's ability to protect fish and fish habitat. In 2019, Bill-C68 amendments reinstated these provisions.[19]

19. https://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/proposed-propose-eng.html

GBA+ considerations in the management of Pacific salmon

Finding: DFO considers feedback from Indigenous Peoples and remote communities to support the planning and management of Pacific salmon programs. However, Indigenous Peoples note that despite being consulted, they do not always see their perspectives included in the department's decision-making in meaningful ways.

1 GUIDING

2 USEFUL

INSPIRING
Values-based, meaningful

4 DEVELOPMENTAL

5 EVALUABLE

The following section addressed the GBA+ evaluation question which is "to what extent have GBA+ considerations been incorporated into the planning and the management of programs related to Pacific salmon?" This falls under the "Inspiring" category of the Principles Focused Evaluation approach, meaning the evaluation assessed whether the principle is value-based and meaningful.

Opinions with regard Pacific salmon vary among the different groups and partners with which DFO consults

- Groups and partners with which DFO consults have different opinions on what is the appropriate pathway forward and how to measure success or the achievement of results. To better understand how or why opinions differ on Pacific salmon, the evaluation adopted a GBA+ approach.[20] While a variety of GBA+ groups were considered, two in particular stood out as having been considered more than others in the management of Pacific salmon: **Indigenous Peoples** and **remote communities**.

INDIGENOUS PEOPLES

- DFO considers Indigenous Peoples in the management of Pacific salmon, so much so that Indigenous people expressed feeling overly solicited by DFO and other government departments to provide their perspectives. However, there is an impression that these perspectives are only included at a superficial level (if at all) in decision-making. More can and should be done to include Indigenous perspectives in addition to consultation. Suggested changes include:
  - Increased transparency, information sharing, and accountability from DFO, including Indigenous involvement in decision-making and performance evaluation through co-design, co-development and co-delivery;
  - Respect for and inclusion of Indigenous Traditional Knowledge (ITK) in DFO decision-making within legislative authorities; and
  - Prioritization of food, social and ceremonial rights to fish.
- From DFO's perspective, the number of consultations, agreements, and collaboration recorded with Indigenous Peoples is the most of any partner group, however, this does not indicate what the quality of engagement was nor whether any changes to salmon management decisions took place.

REMOTE COMMUNITIES

- After Indigenous Peoples, remote communities were largely considered in regards to Pacific salmon due to overlapping interests and needs. For instance, hatcheries are often located in remote communities where DFO and remote communities rely on hatcheries for the management of Pacific salmon and for their livelihoods, respectively.
- In some instances, these remote communities are also Indigenous communities.

20. GBA+ is an analytical process used to assess the potential impacts of government actions (policies, programs, services, and other initiatives) on diverse groups of women and men, taking into account intersecting identity factors (such as gender, age, education, language, geography, culture, and income).

GBA+ considerations in the management of Pacific salmon

1 GUIDING

2 USEFUL

INSPIRING
Values-based, meaningful

4 DEVELOPMENTAL

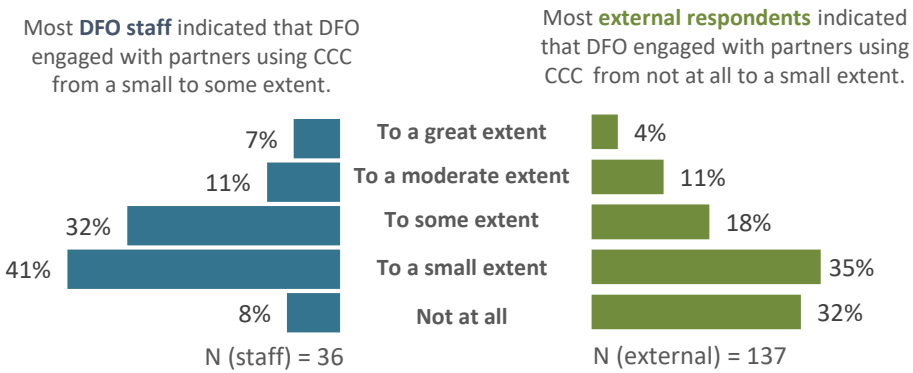
5 EVALUABLE

There are opportunities for DFO to continue engaging with Indigenous partners by working towards using co-design, co-development, and co-delivery approaches in the context of Pacific salmon

- Some advancements are being made by DFO to increasingly consider and include stakeholders perspectives in decision-making; for example, as part of the new *Fisheries Act* amendment, ITK is now provided as part of recommendations to the Minister for certain habitat and fisheries management decisions. Progress is also being made on opportunities identified by the department, for example, strengthening networks and improving mechanisms to share effective and innovative practices with Indigenous Peoples.
- Despite this and other efforts, interviewees stated that DFO could continue to engage Indigenous partners in meaningful ways by working towards using co-design, co-development and co-delivery (CCC) approaches to a greater extent (Figure 19).
- Almost half of internal staff (49%) indicated that the department engaged with partners using CCC from a small to some extent. Most external respondents (67%) indicated that DFO engaged with partners using CCC approaches between not at all to a small extent (Figure 20). The implementation of these approaches is often sporadic. DFO applies co-design, co-development and co-delivery approaches in certain areas and for some programs, but often it is only select groups in specific areas who are involved. External respondents mentioned gaps in communication, particularly in terms of how partners' feedback is ultimately included in decision-making.

Figure 19. Although there are no consistent definitions of CCC approaches, they can be described as follows:[21]

Figure 20. Engagement with staff and external partners on co-design, co-development and co-delivery approaches is low



21. DFO, 2021, Evaluation of Indigenous Commercial Fisheries Program: https://www.dfo-mpo.gc.ca/ae-ve/evaluations/20-21/pdf/icfp-ppca-eng.pdf

GBA+ considerations in the management of Pacific salmon cont'd

1 GUIDING

2 USEFUL

INSPIRING
Values-based, meaningful

4 DEVELOPMENTAL

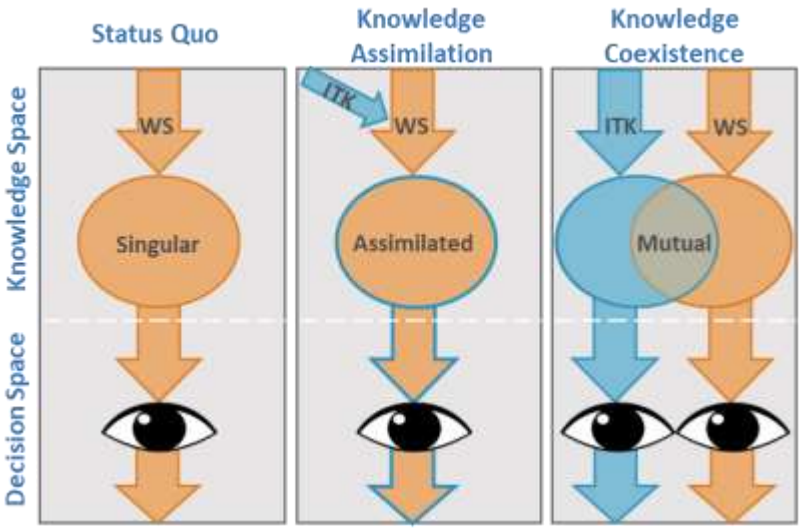
5 EVALUABLE

Pacific salmon has socio-cultural significance for Indigenous Peoples

- To say that Pacific salmon has social and cultural value, means that "personal identity, emotional satisfaction, and psychological well-being"[22] is derived from the ability and opportunity to access this species of fish. This is true for Indigenous Peoples through their relationship with Pacific salmon and as such, the socio-cultural value that salmon represents to Indigenous Peoples should be respected.
- One way this can be done is to learn to see Pacific salmon with the same eyes as Indigenous Peoples. Two-eyed seeing is a way that non-Indigenous people, organizations, governments and researchers may learn to use their knowledge, such as that derived from western science (WS), along with Indigenous Traditional Knowledge (ITK) on salmon (Figure 21).[23]
- This would involve pairing the two prevalent knowledge systems in such a way that both contribute in parallel to generating a mutual understanding rather than an integrated (or assimilated) understanding.
- Two-eyed seeing is moving beyond integrating or incorporating ITK into WS and western decision-making. There is room for DFO to explore the adoption of a two-eyed seeing approach into fisheries research and management. As per the Minister's mandate letter, such an approach would take into account the legislative parameters for incorporating science, the precautionary approach and ITK when making decisions affecting fish stocks and ecosystem management.

Recognizing the importance and value of Pacific salmon for Indigenous Peoples should incite greater efforts to ensure transparency, effective engagement and consideration of Indigenous perspectives in decision-making.

Figure 21. Two-eyed seeing approach



WS = Western Science
ITK = Indigenous Traditional Knowledge

Reid et al. (2020)

22. Anderson, J.H., Warheit, K.I., Craig, B.E., Seamons, T.R., & Haukenes, A.H. (2020). A review of hatchery reform science in Washington State, page 15. Washington Fish and Wildlife Commission.
23. Reid AJ, Eckert LE, Lane J-F, et al. "Two-Eyed Seeing": An Indigenous framework to transform fisheries research and management. Fish and Fisheries. 2020;00:1–19.

The management of Pacific salmon has become increasingly complex

Finding: There are a number of factors, not all within DFO's control, which affect the department's ability to achieve "healthy and abundant salmon stocks". The management of Pacific salmon has therefore become increasingly complex, and any strategy guiding activities in support of Pacific salmon needs to be context-sensitive.

1 GUIDING

2 USEFUL

3 INSPIRING

DEVELOPMENTAL
Context sensitive, complexity adaptable, not time-bound

5 EVALUABLE

Factors affecting the department's ability to manage Pacific salmon are discussed next. This section of the report falls under the "developmental" category in the Principles Focused Evaluation approach, meaning that the evaluation focused on whether the principle is context sensitive, complexity adaptable and not time-bound

Managing stocks of Pacific salmon has become progressively challenging for various external factors that are outside DFO's control. Among them are legislative, ecosystem, economic and political factors, some of which are discussed on the following pages.

Legislative factors include evolutions in international agreements, Supreme Court decisions, and Canadian legislation governing species at risk;
Economic factors include shifts in global markets;
Ecosystem factors include climate change, related changes in ocean productivity, prey availability and deforestation; and
Political factors include the strong public expectations of how Pacific salmon should be managed and lack of inter-jurisdictional collaboration.

Climate Change

The effects of climate change are having cumulative impacts on Pacific salmon and their habitats. Nevertheless, some DFO staff noted that the principle **doesn't factor in climate change**, even though this will affect future definitions of 'healthy' and 'abundant'. Warming in marine and freshwater ecosystems affects food webs, contributes to stock declines, and limits stock assessments.

DFO 100%

DFO staff unanimously said that climate change hinders DFO's ability to achieve healthy and abundant salmon stocks more than any other internal or external factor.

Partners 46%

Almost half of **external partners** surveyed also indicated that climate change hinders DFO's ability to achieve the same.

Availability of science advice

The availability of science advice drives management approaches since stock status determines which management frameworks will inform harvest, hatchery, as well as, increasingly, habitat rebuilding strategies. DFO collects information through population, catch, and ecosystem monitoring programs. Science staff are distributed among various programs, branches and areas related to Pacific salmon. As a result, coordinated work-planning is needed to link activities and outputs to understand the evolving nature of Pacific salmon, including the impacts of climate change.

DFO 56%

Most **DFO staff** say scientific advice (i.e., through the Canadian Science Advisory Secretariat) facilitates DFO's ability to achieve healthy and abundant salmon stocks. Science advice is evolving to address ongoing research and operational needs.

DFO 46%

Partners 20%

At the same time, some **DFO staff** and a few **external partners** agreed that lack of scientific advice also hinders DFO's ability to achieve the same. More integrated science advise is needed, particularly in support of habitat activities.

The management of Pacific salmon has become increasingly complex

1 GUIDING

2 USEFUL

3 INSPIRING

DEVELOPMENTAL
Context sensitive, complexity adaptable, not time-bound

5 EVALUABLE

Inter-jurisdictional coordination

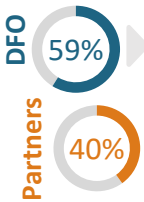
DFO has fostered successful partnerships with external partners and stakeholders such as communities, ENGOS, and FNs. For example, a network of community-based groups assisted in operating and delivering local enhancement projects, such as DFO's response to the Big Bar slide (Box 6). Nevertheless, given DFO's regulatory and fiduciary responsibility for Pacific salmon management, stronger coordination is needed where partners also have jurisdiction over factors affecting Pacific salmon (e.g., forestry, urbanization, etc.). DFO's ability to achieve objectives related to Pacific salmon is significantly hindered when inter-jurisdictional collaboration is lacking.

Both DFO staff and external partners rated the extent of DFO's coordination with inter-jurisdictional groups from **greatest** to **least** as:

- **International**
- **Indigenous**
- **Provincial and Territorial**
- **Municipal**

Habitat degradation

Pacific salmon are negatively impacted by the loss and degradation of critical habitat. Habitat degradation can occur due to pollution, climate change, deforestation, and land development, etc. For instance, deforestation in B.C. has been significant and ongoing as a result of divided jurisdictional responsibilities between the federal and provincial governments.



Most **DFO staff** and some **external partners** agreed that pollution hinders DFO's ability to achieve objectives related to Pacific salmon.

Deforestation from the pine beetle epidemic and subsequent logging practices south of Kamloops, B.C.

Box 6. Big Bar Land Slide Response

On June 23, 2019, a significant landslide was reported in a remote canyon along the Fraser River near Big Bar, B.C. Landslide debris prevented migrating Pacific Fraser salmon from reaching their spawning grounds, thus impacting the reproductive cycle of several key Upper Fraser salmon populations. Five days after the discovery, a **Big Bar Incident Command Post (ICP)** consisting of experts and specialists from First Nations, the Government of B.C. and the GoC was established to respond to the emergency situation. ICP emergency response efforts between June and September 2019 included:

- Rock scaling to stabilize the cliff and establish site safety;
- In-river rock manipulation to improve natural passage;
- Transportation of fish past the slide site, and
- Intensive fisheries, hydrological and geotechnical monitoring.

As a result of these efforts, approximately 276,000 salmon were detected passing Churn Creek, 40 km north of the site.

The management of Pacific salmon has become increasingly complex

1 GUIDING

2 USEFUL

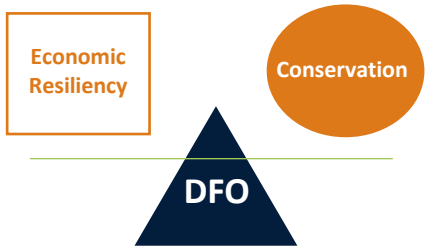
3 INSPIRING

DEVELOPMENTAL
Context sensitive, complexity adaptable, not time-bound

5 EVALUABLE

External Pressures

Opinions concerning Pacific salmon are strong due to the species' contribution to the economy of the Pacific region and strong social and cultural attachments. DFO management practices balance economic resiliency and conservation alongside a number of stakeholder and partner interests such as industry and Indigenous partners. External pressure from stakeholders may hinder DFO's ability to reach consensus on Pacific salmon decisions, such as fisheries closures.



- In the case of Atlantic cod, a similarly economically important fish stock in Atlantic Canada, DFO addressed declining fish stocks via fisheries moratoriums in the 90's, most of which are still in place today. Evaluation evidence found that stakeholder and partner interests based on a strong social and cultural attachment to cod was the strongest external factor driving cod fisheries management. Today, cod fisheries are guided by an **ecosystem-based management approach**, including **rebuilding plans** and **conservation harvesting plans.**

IUU fishing

Illegal unreported and unregulated (IUU) fishing practices in the high-seas and within nationally-controlled waters threaten the sustainability of capture fisheries by contributing to the destruction of marine habitat and reduced global fish stocks. Worldwide, IUU fishing is estimated to represent up to 26 million tonnes of fish caught annually and is valued between $10 to $23 billion USD.[24]

C&P Inspection boarding

C&P aerial surveillance

- In Atlantic Canada, DFO's Conservation and Protection Branch - International Unit monitors IUU fishing to **support stock returns** and **regional harvest opportunities.** In contrast, there is no dedicated offshore unit in the Pacific Region where inspections often rely on vessels shared with other partners.[25] To deter IUU fishing, DFO must address:
  - **Knowledge gaps** given that the direct impact of IUU fishing on specific fish stocks is unknown; and
  - **Resource gaps** given that inspection capacity in the North Pacific is limited due to significant resource and logistical challenges.

24. Fisheries and Oceans Canada. 2019. *Illegal, Unreported and Unregulated (IUU) Fishing.* URL: https://dfo-mpo.gc.ca/international/isu-iuu-eng.htm
25. Partners include the Department of National Defense (DND), Canadian Coast Guard (CCG), or United States Coast Guard (USCG).

The management of Pacific salmon has become increasingly complex

1 GUIDING

2 USEFUL

3 INSPIRING

DEVELOPMENTAL
Context sensitive, complexity adaptable, not time-bound

5 EVALUABLE

DFO's overall influence over the external factors that affect Pacific Salmon is limited.

- The management of Pacific salmon is complex because of the multiple external factors acting on the species at different stages of its lifecycle. For instance, external factors that are related to Pacific salmon habitat, such as inter-jurisdictional coordination and habitat degradation can impact the species' freshwater life stages. Meanwhile, IUU fishing pressures in the high-seas of the North Pacific affect Pacific salmon during their ocean migrations. Climate change related pressures on Pacific salmon are an exception as they are being felt throughout the entire species' range.
- The unknown cumulative impact of these external factors affects the outcome of DFO's activities in support of Pacific salmon. As a result, DFO's influence over outcomes related to Pacific salmon is such that the department could successfully implement a number of management actions and still not be able to achieve healthy and abundant stocks.
- Moving forward, the evaluation found a number of good practices and lessons learned that DFO can apply to the management of a declining stock, such as Pacific salmon (Box 7).

Box 7. Good practices and lessons learned

DFO has adapted to this dynamic operating context, however policies and programs related to Pacific salmon must continue to evolve to acknowledge contemporary challenges and provide objectives that are clear, measurable and realistic. The following lessons learned and good practices are further described in **Annex C.**

1. Modifying fishing gear where possible to avoid unintended bycatch.

2. Applying data-limited approaches to mitigate uncertainty around knowledge gaps.

3. Meaningful engagement is key to balancing harvest and sustainability.

4. Selective fisheries can play a role in supporting the future viability of stocks where enhancement and appropriate controls are in place.

5. Conservation and protection of highly migratory fish stocks requires engagement, collaboration and joint implementation with domestic and international partners.

A clear performance story is impacted by the multitude and variety of methods and data collected on Pacific salmon

Finding: Performance data related to Pacific salmon is tracked by multiple programs and branches within the department, oftentimes indirectly and without an overarching results framework that is salmon-specific. As a result, progress towards "healthy and abundant salmon stocks" is difficult to evaluate in the absence of an ultimate outcome for the management of Pacific salmon.

1 GUIDING

2 USEFUL

3 INSPIRING

4 DEVELOPMENTAL

EVALUABLE
Able to document and judge results

Findings related to performance data and resources fall under the "evaluable" category in the Principles Focused Evaluation approach, meaning that the evaluation focused on whether the principle is able to document and judge results.

The absence of an ultimate outcome related to Pacific salmon poses challenges for evaluation

- The decentralized nature of activities in support of Pacific salmon have led to a multitude of performance data being collected across multiple programs and areas of the department. However, performance data related to Pacific salmon cannot be evaluated in the absence of an ultimate outcome.
- Generally, DFO does not track results by species. Instead, the department tracks multiple species using an ecosystems-based management (EBM) approach. Despite the challenges associated with EBM, the approach ensures key linkages are made between ecosystems in various decision making processes.
- The department's program inventory was not developed with species-specific outcomes, such as outcomes that are unique to Pacific salmon. Exceptions include outcomes that are related to departmental priorities, such as the South Resident Killer Whale Initiative.
- While the WSP outlines DFO's approach and activities for the conservation of Pacific salmon, including reporting and tracking, limited accountability to the WSP at the regional and national level has led to the lack of an established performance review process for results related to Pacific salmon. Nevertheless, there are a number of different options that can help inform performance reporting for Pacific salmon (Box 8).

Moving forward, the tracking of milestones related to the Pacific Salmon Strategy Initiative (PSSI) has been identified as a departmental priority in June 2021. Quarterly updates will be provided through the departmental tracking process for information and for discussion.

Box 8. Different options are available to track results related to Pacific salmon and help inform performance reporting:

A. **Introducing species-level tracking within DFO's program inventory.** The department has tools at its disposal within it's DRF to identify and track cross-cutting issues, such as those related to Pacific salmon, across programs to demonstrate results.

B. **Tracking through the departmental priority tracking process.**

C. **Creating a unique Salmon Program in DFO's Program Inventory that includes a Performance Information Profile (PIP).** Note, this would result in the loss of horizontality and resources that occurs when many programs achieve results for Pacific salmon.

A clear performance story is impacted by the multitude and variety of methods and data collected on Pacific salmon

1 GUIDING

2 USEFUL

3 INSPIRING

4 DEVELOPMENTAL

EVALUABLE
Able to document and judge results

Performance data related to Pacific salmon is available from a variety of sources within the department

- Progress towards healthy and abundant salmon stocks is difficult to evaluate because performance data are widely linked to the various **regional activities** (Figure 22), **DFO programs** (Figure 23) and **management levers** (Figure 24) that deliver on activities in support of Pacific salmon. As a result, performance data is difficult to integrate and report on across multiple channels, particularly at the species-level.

Figure 22. Multiple activities are supported by 19 results and indicators that directly link to Pacific salmon.[26]

Figure 23. Programs such as Fisheries Management and the Salmonid Enhancement Program track **most** indicators related to Pacific salmon.

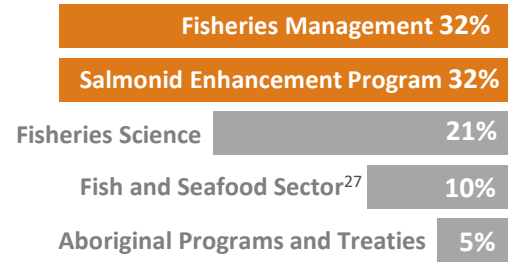
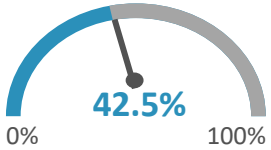


Figure 24. Performance data that is **directly linked** to Pacific salmon mostly supports DFO's **harvest** lever, followed by the **hatcheries lever**. Activities under the habitat lever, such as protection and restoration, are tracked indirectly (i.e., not by species).

- The WSP also tracks performance data related to the abundance of salmon stocks managed by DFO by tracking the proportion of salmon conservation units that are found in **cautious and healthy zones** (Figure 25).[28]

Figure 25. The proportion of salmon stocks found in cautious and healthy zones has remained unchanged between 2018 to 2019



26. In addition: 5 support socio-economics, 4 support reconciliation, 3 support stewardship, 2 support enforcement and regulatory frameworks, and 1 supports inter-jurisdictional coordination
27. The Fish the Seafood Sector (FSS) Program was added to DFO's DRF under the Fisheries core responsibility in 2020-21. The FSS allows the department to tell a results story that better reflects its priorities and activities related to a sustainable and competitive fish and seafood sector.
28. Stock status zones are prescribed by DFO's Fishery Decision-Making Framework Incorporating the Precautionary Approach. In the healthy zone, the fish stock status is good, and fisheries management decisions and harvest strategies are designed to maintain fish stocks within this zone. In the cautious zone, decisions and strategies promote stock rebuilding to the healthy zone

Tracking resources by species is not a routine practice, therefore obtaining information specific to Pacific salmon is difficult

Finding: Within the department, the tracking of resources by specific species is not a routine practice. As a result, financial, human and materiel resources in support of Pacific salmon have been difficult to track. Related accountabilities for financial tracking within the department have likewise been difficult to identify. DFO could leverage internal tools and/or methodologies to improve the tracking of resources.

1 GUIDING

2 USEFUL

3 INSPIRING

4 DEVELOPMENTAL

EVALUABLE
Able to document and judge results

Accountabilities linked to Pacific salmon resources are challenging to identify

- Financial information specifically related to either Pacific salmon or the three management levers is not readily available within the department. Exceptions include the high-costing exercise conducted in 2016 as discussed on page 7.
- There are a number of reasons for this:

The management of Pacific salmon is multi-faceted, involving many sectors and programs cutting across national and regional issues

As activities cut across the entire department, different branches and programs are responsible for delivering them either directly, (i.e. through SEP and The Pacific Salmon Foundation) or indirectly (i.e. through the Conservation and Protection and Science branches).

Departmental activities generally target multiple species

DFO, alongside other government departments like Parks Canada (PC) and Environment and Climate Change Canada (ECCC), maximizes resources where possible by targeting multiple species. This makes it difficult to separate out the financial, human and materiel resources specific to Pacific salmon.

Governance structures for Pacific salmon lack clarity and accountability

As DFO does not generally track by species or have clear governance structures specific to the management of Pacific salmon, financial accountabilities for these species is difficult to identify at a granular level.

Tracking resources by species is not a common practice, therefore obtaining information specific to Pacific salmon is difficult

1 GUIDING

2 USEFUL

3 INSPIRING

4 DEVELOPMENTAL

EVALUABLE
Able to document and judge results

Resources allocated to Pacific salmon are difficult to estimate

- DFO does not have an internal mechanism to systematically track all resources associated with Pacific salmon. Proxies for tracking, such as FTE-time spent on Pacific salmon activities, have been used in the past to identify resources. However, similar exercises were not deemed feasible based on time and effort constraints associated with them at the operational level.
- Because financial tracking by species is challenging, it is difficult to calculate the resources that are allocated to Pacific salmon relative to other species in the Pacific Region. Nevertheless, a few interviewees indicated that the proportion of resources allocated to Pacific salmon largely outweighs that allocated to managing all other species managed by the Pacific Region.
- There are a number of financial tracking options that DFO can use as the department is frequently asked to provide information about the resources that are allocated to Pacific salmon (Box 9).

Allocation and tracking of resources in support of Pacific salmon can be improved

DFO 68%

Most **DFO staff** rate the current allocation of resources for activities in support of Pacific salmon as being appropriate **from a small to some extent.**

DFO 47%

Some **DFO staff** noted that the tracking of financial resources, where available, is either **quite onerous or limited to one program or area.**

DFO 42%

Some **DFO staff** surveyed do not know to what extent the current tracking of resources addresses DFO's needs.

Box 9. Alternative financial tracking options

To track resources in support of Pacific salmon activities, DFO can pursue alternative practices for financial tracking. These are further discussed in **Annex D**.

A) Status Quo continuation of high-level costing exercises;

B) Application of consistent departmental tracking methodologies;

C) Use of a single reporting structure; and

D) Use of project codes to allocate costs by species directly in DFO's SAP financial system.

Improved coordination of G&C programs could lead to better outcomes for Pacific salmon

Finding: Transfer payments, such as grants and contributions (G&C) programs, for activities in support of Pacific salmon lack a coordinated approach. As a result, there are opportunities for the department to take a proactive and strategic approach to achieve Pacific salmon objectives.

1 GUIDING

2 USEFUL

3 INSPIRING

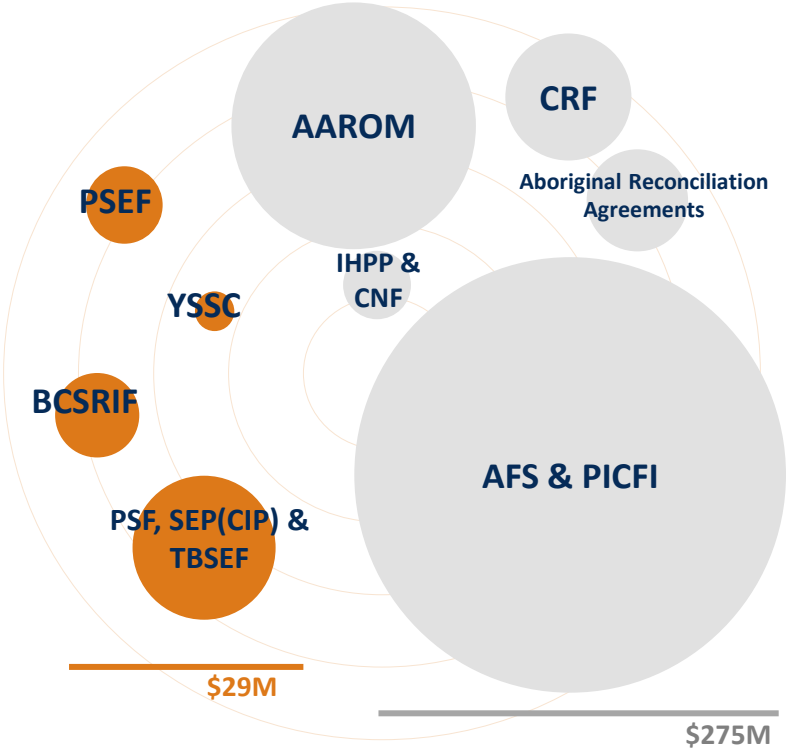
4 DEVELOPMENTAL

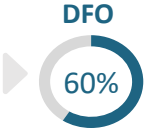
EVALUABLE
Able to document and judge results

Pacific salmon grant and contribution programs lack a coordinated approach

- Numerous G&C programs exist within DFO to directly and indirectly support activities related to Pacific salmon.
- When G&C programs may contribute indirectly to Pacific salmon and are not tracked, it is difficult to identify total resources being allocated to Pacific salmon. Based on public accounts, $29M was granted to G&C recipients in the Pacific Region between 2016 and 2020 under programs linked through common objectives specific to Pacific salmon (Figure 26). These include:
  - the Pacific Salmon Endowment Fund **(PSEF);**
  - Yukon Salmon Sub Committee **(YSSC);**
  - British Columbia Salmon Restoration and Innovation Fund **(BCSRIF);**
  - Pacific Salmon Foundation **(PSF);**
  - Salmon Enhancement Program **(SEP);**
  - Community Involvement Program **(CIP);** and
  - T. Buck Suzuki Environmental Foundation **(TBSEF).**
- Another $275M was granted to G&C programs that could support Pacific salmon indirectly. These include transfer payment programs that support salmon indirectly through objectives such as improving relationships with Indigenous Peoples, minimizing negative impacts on ecosystems, etc. A complete list of G&C programs can be found in **Annex E**.
- While most **DFO staff** agree that transfer payments are appropriate to support the three levers, evaluation evidence points to a lack of a coordinated approach for G&C programs in support of Pacific salmon.

Figure 26. Direct and indirect G&C programming in support of Pacific salmon from 2016 to 2020





Improved coordination of G&C programs could lead to better outcomes for Pacific salmon

1 GUIDING

2 USEFUL

3 INSPIRING

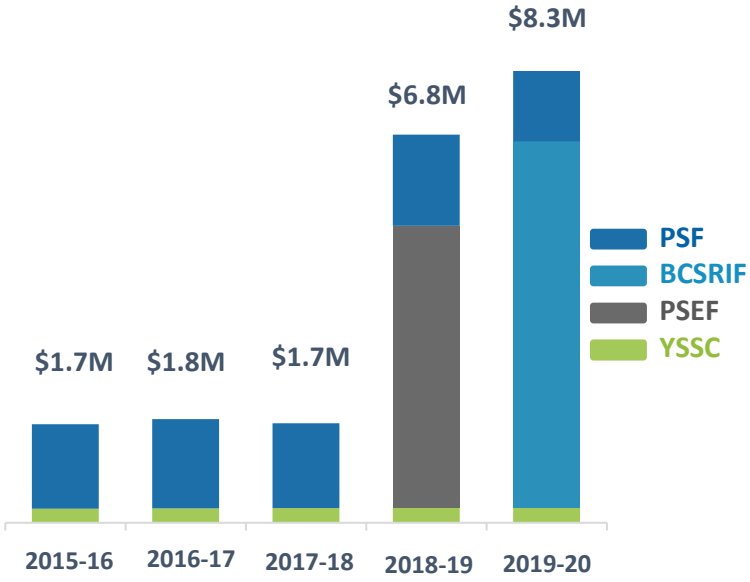
4 DEVELOPMENTAL

EVALUABLE
Able to document and judge results

Departmental funding to support Pacific salmon activities is increasing

- Regional spending on Pacific salmon has significantly increased over the evaluation period (Figure 27).
  - Under the PSEF, additional funding of $5M was received in 2018-19.
  - Additional funding was also received under BCSRIF in 2019-20 and is ongoing.
- DFO does not have a prioritization system for G&C delivery that links to a broader direction and vision. Instead, G&C programs are proposal driven, in particular programs related to habitat activities.
- Interviewees indicated that DFO is working in a reactive manner rather than using a proactive approach to link G&C programs with overarching priorities.
- With budgets increasing in 2020-21, as discussed on page 7, the need for a coordinated approach is even more critical to ensure DFO obtains the greatest possible impact from departmental investments in support of Pacific salmon.

Figure 27. DFO spending ($ millions) under G&C programs directly linked to Pacific salmon has increased from 2016 to 2020



- DFO is already in the process of identifying areas for consistent implementation of transfer payment programs. For example harmonization of Indigenous grant and contribution programs is already underway.
- Moving forward, it should be noted that harmonization efforts are not intended to be mutually exclusive.

Conclusions and Recommendations

Conclusions

Salmon is integrally important to communities in Canada's Pacific Region. With declining salmon stocks, there is an ongoing need to continue to manage Pacific salmon under DFO's legal authority and mandate and in accordance with existing Aboriginal and Treaty rights. There are a number of hindering factors, not all within DFO's control, which affect the department's ability to achieve "healthy and abundant salmon stocks", however, there are many challenges within DFO's control that exist as well.

- DFO currently operates with limited strategic direction and vision to guide activities in support of Pacific salmon. Although roles and responsibilities are clear within programs and sectors, accountabilities for Pacific salmon are unclear within the department and the integration between DFO's harvest, hatcheries and habitat management should be improved.
- Transfer payments, such as grants and contributions (G&C) programs, for activities in support of Pacific salmon do not form part of an overarching framework, and are instead largely proposal driven.
- Although feedback has been sought from Indigenous Peoples and remote communities in support of the planning and management of Pacific salmon programs over the past five years, Indigenous Peoples note that they do not see Indigenous Traditional Knowledge reflected in meaningful ways in the department's decision-making.
- The current structuring of financial, human and materiel resources related to Pacific salmon are difficult to track given that multiple programs and branches within the department have responsibilities and thus performance data is also spread out without any overarching results framework to measure success by.

According to the evaluation evidence, the management of **Pacific salmon** could be strengthened by :

- **Creating a strategic vision for Pacific salmon** that can be implemented across DFO, including an ultimate outcome to guide performance measurement and the delivery of G&C programs;
- **Implementing an integrated approach** to bring together all the different areas of the department that have responsibilities for Pacific salmon and that will be results-focused;
- **Developing a G&C program framework** to be able to measure and coordinate transfer payments supporting Pacific salmon activities;
- Working towards **improving internal collaboration and external partnerships**; and
- **Leveraging internal tools and methodologies to improve the financial tracking** of activities related to Pacific salmon.

Recognizing that salmon is one of many species that the department is responsible for, this evaluation (particularly the cross-cutting nature of the evaluation findings and resulting recommendations) may have potentially broad impacts on the management of other species within the department.

Conclusions (con't)

In addressing any recommendations stemming from this report, the evaluation recognizes that during the period this evaluation was conducted, the federal government announced an investment of $647.1 million for the Pacific Salmon Strategy Initiative (PSSI), through Budget 2021. This new, robust, evidence-based strategy aims to address downward trends in many Pacific salmon populations through an integrated approach to salmon management

The Initiative will guide investments focusing on four pillars designed to support a strategic and coordinated long term response, rooted in collaborative action as follows:

- stronger science and habitat restoration;
- stabilizing and growing the salmon populations;
- sustainable and reliable fisheries, and,
- deeper communication and coordination between partners.

The funds announced through Budget 2021, will help preserve wild Pacific salmon, by:

- Stabilizing and conserving wild Pacific salmon populations, including through investment in research, new hatchery facilities, and habitat restoration.
- Creating a Pacific Salmon Secretariat and Restoration Centre of Expertise.
- Improving management of commercial and recreational fisheries.
- Doubling the British Columbia Salmon Restoration and Innovation Fund with an additional $100 million.
- Further engaging with First Nations and fish harvesters.

These investments will help address some of the challenges highlighted throughout this report and the recommendations proposed on the following pages are meant to offer foundational guidance as new policies, programs, and actions under each pillar of the strategy move ahead.

Recommendations

A foundational strategic direction and vision for Pacific salmon

Recommendation #1: Develop a strategic direction and vision for Pacific salmon

It is recommended that the Regional Director General, Pacific Region and the Executive Head Pacific Salmon Strategy Transformation, in collaboration with the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy and the Assistant Deputy Minister Ecosystems and Oceans Science create a clearly defined and unified **strategic direction and vision for the management of Pacific salmon** that can be implemented across the department and communicated to internal and external stakeholders.

Rationale: The need for an integrated direction and vision for Pacific salmon was raised throughout this evaluation as necessary to bring together all areas of the department that have responsibilities for activities in support of Pacific salmon and is a foundational step in ensuring a unified approach to the delivery of these activities. The establishment of a strategic direction and vision will assist in providing unified guidance throughout the department on the principles underlying Pacific salmon management.

Recommendations

Tools in support of Pacific salmon's strategic direction and vision

Recommendation #2: Implement a coordinated approach for transfer payments that is aligned with the strategic direction and vision for Pacific salmon

It is recommended that the Regional Director General, Pacific Region, in collaboration with the Executive Head, Pacific Salmon Strategy Transformation, the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy, the Assistant Deputy Minister Ecosystems and Oceans Science and the Chief Financial Officer implement a **coordinated approach for transfer payment programs supporting Pacific salmon that is aligned with the departmental strategic direction and vision.**

Rationale: An integrated approach is needed to bring together all the different areas of the department that are involved in the delivery of Pacific salmon grant and contribution transfer payment programs. The evaluation identified a need to be more strategic in the prioritization of grants and contributions, which are currently proposal driven. A coordinated approach for transfer payments supporting Pacific salmon would ensure that projects are clearly linked to the departmental strategic direction and vision. It would also ensure that outcomes from those transfer payments can be linked to results for Pacific salmon.

Recommendation #3: Implement tools and methodologies to track resources in support of Pacific salmon

It is recommended that the Regional Director General, Pacific Region, in collaboration with the Executive Head, Pacific Salmon Strategy Transformation, the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy, the Assistant Deputy Minister Ecosystems and Oceans Science and the Chief Financial Officer leverage internal tools and methodologies to **improve the financial tracking of activities related to the management of Pacific salmon.**

Rationale: The evaluation found that financial information related to Pacific salmon species and DFO management levers is not readily available within the department. Identifying accountabilities linked to financial resources is challenging. Improvements to the tracking of financial, human and materiel resources related to Pacific salmon can help identify accountabilities for the allocation of resources within the department. This will in turn improve the performance data that is available to inform decision making.

Recommendations

Tools in support of Pacific salmon's strategic direction and vision

Recommendation #4: Implement a performance measurement strategy for activities in support of Pacific salmon

It is recommended that the Regional Director General, Pacific Region and the Head of Performance Measurement, in collaboration with the Executive Head, Pacific Salmon Strategy Transformation, the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy and the Assistant Deputy Minister Ecosystems and Oceans Science develop and implement a **performance measurement strategy for activities in support of Pacific salmon** that is consistent with the department's strategic direction and vision for Pacific salmon and that clearly identifies the department's expected results.

Rationale: It is acknowledged that there are a number of hindering external factors which affect the department's ability to achieve results for Pacific salmon, some of which are out of DFO's control. The need for a robust performance measurement strategy was identified throughout this evaluation as necessary to provide the department with targets and data to clearly articulate results for Pacific salmon despite the existence of known external factors.

Recommendation #5: Clearly define the governance framework for departmental activities in support of Pacific salmon

It is recommended that the Executive Head, Pacific Salmon Strategy Transformation, in collaboration with the Regional Director General, Pacific Region, the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy and the Assistant Deputy Minister Ecosystems and Oceans Science **implement a clearly defined governance framework for activities in support of Pacific salmon** that is consistent with the department's strategic direction and vision for Pacific salmon and that clearly identifies roles and responsibilities across DFO programs at the regional and national level.

Rationale: It is acknowledged that governance frameworks lack clarity within the region and nationally across the department. Roles and responsibilities for Pacific salmon are well defined within DFO's program siloes but are not clear across other areas of the department due, in part, to unclear accountabilities associated with a lack of clear direction and vision for the management of Pacific salmon. The need for a clearly defined governance framework was identified throughout the evaluation to establish a holistic and integrated national and regional approach for the management of Pacific salmon.

Annexes

Annex A. Methodology, limitations and mitigation strategies

Although the evaluation encountered some methodological challenges, methodological limitations were mitigated, where possible, through the use of multiple lines of evidence and the triangulation of data. This approach was taken in order to establish the reliability and validity of the findings and to ensure that conclusions and recommendations were based on objective and documented evidence.

Administrative & financial data

The evaluation team conducted a review of all administrative data pertaining to Pacific salmon, including performance and financial data. Included in this review were the performance information profiles across several programs including Fisheries Management, Salmonid Enhancement, Conservation and Protection, and Fisheries Science. The financial data analysis included the costing study commissioned by the department in 2018, information extracted from DFO's management reporting systems by Pacific Region staff, and G&C information available in DFO's Departmental Plans and the Public Accounts. Due to the extensive nature of the activities in support of Pacific salmon in the region, there was limited financial tracking done during the scope of the evaluation.

Limitations and Mitigation:

- DFO's activities, and funding, regarding salmon in the Pacific is extensive and integrated. This means that there are FTEs who may spend only part of their time working on Pacific salmon activities. Because of this, it was not possible to accurately or completely capture this complexity for the period covered by the evaluation without some significant assumptions.
- Performance data collection and monitoring at DFO began in 2016 and is relatively new in the department. As targets and indicators linked to Pacific salmon were either added, adjusted or discontinued during the scope of the evaluation to reflect departmental priorities, the data set is incomplete for much of the evaluation period. As a quantitative analysis could not be performed, the evaluation focused instead on examining the quality of the performance data indicators.
- Information gathered from multiple lines of evidence was triangulated to address questions that stemmed from the analysis of administrative data.

Interviews

The evaluation team conducted 79 interviews (22 scoping, 34 conduct interviews and 23 interviews as part of the case studies) with individuals in Pacific Region and National Headquarters to gather views of DFO employees and stakeholders on the need for DFO to continue to participate in the management of Pacific salmon. These interviews were conducted using the principle-based evaluation framework.

Limitations and Mitigation:

- Due to COVID-19, site visits and subsequent in-person interviews were not possible for this evaluation. In order to receive input and provide adequate opportunity, the evaluation team administered a survey across all identified stakeholders and partners.

Annex A. Methodology, limitations and mitigation strategies

Surveys

The evaluation team conducted two surveys: one for DFO Pacific Region employees, and one for external partners and stakeholders in the Pacific Region.

DFO Employees Survey

The survey of the DFO Pacific Region's employees gathered information on their perceptions of their roles, and the role of DFO in the management of Pacific salmon. The employees surveyed were at the manager level who were identified as being involved with Pacific salmon as part of their role. The survey was sent to 73 employees, with 40 completed responses received, representing a 55% response rate. The survey was administered online between February and March 2020.

External Stakeholder Survey

The survey of external stakeholders involved in the management of Pacific salmon gathered information on their perception of their roles, and the role of DFO in the management of Pacific salmon. These stakeholders were identified by DFO regional staff. The survey was sent to approximately 386 individuals, with 108 completed responses received, representing an approximate response rate of 27%. The survey was administered online between March and April 2020.

Limitations and Mitigation:

- Due to the anonymous nature of the survey, it is impossible for the evaluation team to determine if the survey link was forwarded to other participants, therefore increasing the "n" value. Survey respondents who wished to forward the survey to other stakeholders were asked to provide the evaluation team with the contact information for those individuals in order to track the "n" value.
- This may be the less effective route of communication for some individuals (in-person and/or an interview may be more effective, however this was prevented by COVID). Survey access was left open for an additional week which allowed more opportunity for responses to be gathered.
- Given the high proportion of recreational fishers who responded to the survey, the evaluation team ran different analyses to assess the impact of the disproportionate nature of the responses i.e. by running an analysis that included and then excluded this group.

Document review

The evaluation team completed a review of DFO and external documents to understand the context and background of Pacific salmon, and to assess the general need for the management of Pacific salmon, and best practices.

Annex A. Methodology, limitations and mitigation strategies

Case studies & documented example

The evaluation team conducted three case studies identified through scoping interviews with DFO's Pacific Region and senior management as well as one documented example on cod management in Atlantic Canada.

Case Study #1: Mark-Selected Fisheries

The case study aims to give a high-level overview of DFO's options related to Chinook recreational harvest opportunities using mark-selective fishery. This case study presents five options to increase the benefit relative to the cost in regards to DFO's management of Chinook stocks using mark-selective fishery. The methodology included document review, a literature review, and ten interviews with key informants.

Case Study #2: The Socio-cultural Significance of Pacific Salmon

The case study focuses on Indigenous and coastal communities in order to highlight the historical socio-cultural value that these communities derive from Pacific salmon. The methodology included a literature review, seven interviews with key informants, the external survey, and a review of previous engagement with Indigenous stakeholders as part of the Indigenous Program Review.

Case Study #3: Illegal, Unreported and Unregulated (IUU) Fishing

The case study examines the incidence of Illegal, Unreported, and Unregulated (IUU) fishing in the North Pacific as it relates to IUU fishing impacts on Canadian stocks of Pacific salmon. Methods to prevent IUU fishing of salmon in the North Pacific are discussed. The methodology included an internal literature review, document review, administrative data review and six interviews with key informants. Information gathered from multiple lines of evidence was triangulated to address the case study questions.

Documented Example: Atlantic Cod

The purpose of the documented example was to discuss management responses applied to Atlantic cod to document lessons learned that may broadly apply to other fish stocks in decline. Sources for this example included document review and interviews. This provided insight into another complex fisheries recovery led by DFO.

Limitations and Mitigation:

- Due to the specific subject matter of the case studies and documented example, only a limited number of interviews were conducted with subject matter experts.
- For the socio-cultural significance case study, the literature reviewed focused on issues that were broader than Pacific salmon. To mitigate, multiple lines of evidence were used and all information gathered was triangulated to address the case study questions. Also, the external survey was sent to a large number of individuals and organizations who identify as Indigenous, however there was a limited number of Indigenous respondents.
- For IUU, the number of internal documents on this subject were limited. This lack of access to corporate memory was compensated for through an extensive library search of external documents.
- For the documented example, the evaluation team relied on the (minimal) corporate memory that was still available within the department.

Annex B. Policy context driving the management of Pacific salmon

Policies and legislative frameworks governing the management of Pacific salmon include:

COSEWIC 1977

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) provides a single, scientifically-sound classification of wildlife species at risk of extinction.

Pacific Salmon Treaty 1985

The Pacific Salmon Treaty (PST) is the primary agreement that guides Canada's international obligations related to Pacific salmon. The Treaty commits Parties to cooperate on science, stock assessment, salmon enhancement, and to develop specific conservation and harvest sharing arrangements for specific salmon stocks and fisheries.

Salmon Allocation Policy 1999

The Salmon Allocation Policy (SAP) guides annual allocations of salmon in B.C. among First Nations, recreational and commercial harvest groups, as well as among gear types in the commercial fishery. The policy is consistent with legal obligations towards First Nations and Canada's international obligations, including the PST. The SAP is currently under review.

Species at Risk Act 2002

The *Species at Risk Act* (SARA) provides a legislative basis for the protection of wildlife species at risk including the prevention of wildlife becoming extirpated or extinct, support for the recovery of endangered or threatened species, and management of species of special concern. Once listed under SARA, species designated by COSEWIC as at-risk would qualify for legal protection and recovery under the Act, depending on their risk level.

Wild Salmon Policy 2005

The Wild Salmon Policy (WSP) advances goals to safeguard the genetic diversity of wild Pacific salmon populations, maintain habitat and ecosystems integrity, and manage fisheries for sustainable benefits. The WSP was updated in 2017 and a 2018-2022 Implementation Plan was developed in response to Recommendations from the Cohen Commission on restoring sockeye salmon stocks in the Fraser River.

Sustainable Fisheries Framework 2010

The Sustainable Fisheries Framework (SFF) establishes **DFO's Precautionary Approach** to fisheries management, including establishing a harvest strategy that identifies three stock status zones relative to a limit reference point as healthy, cautious, or critical to determine removal rates within each zone. The SFF also provides the basis for an ecosystem approach to fisheries management.

Fisheries Act and Bill C-68 2019

The Fisheries Act (1985) gives DFO the authority to manage Pacific salmon and their habitat. The amendments made through **Bill C-68** prescribed new fish stocks provisions that require rebuilding plans for stocks that fall below a limit reference point.

Annex C. Good practices and lessons learned

Three case studies and a documented example were conducted as part of this evaluation, including: Atlantic cod management; Chinook selective fisheries; illegal, unreported and unregulated (IUU) fisheries; and the socio-cultural value of Pacific salmon. The following good practices and lessons learned were documented in support of management of highly migratory fish stocks, they are further described on page 30:

Lessons learned	1. Modifying fishing gear where possible to avoid unintended bycatch.	2. Applying data-limited approaches to mitigate uncertainty around knowledge gaps.	3. Meaningful engagement is key to balancing harvest and sustainability.	4. Selective fisheries can play a role in supporting the future viability of stocks where enhancement and appropriate controls are in place.	5. Conservation and protection of highly migratory fish stocks requires engagement, collaboration and joint implementation with domestic and international partners.
Context	Although conservation measures were in effect, stocks of concern were still being caught as bycatch in other fisheries.	Despite following scientific advice, anticipated positive impacts on stocks of concern have not materialized for reasons that still are not well understood.	The interplay between external pressures to increase harvest and the socio-cultural value attached to certain species impede sustainable management.	With increased limited recreational fisheries due to stocks of concern, the general public has little opportunity to harvest Pacific salmon.	IUU fishing trends indicate that foreign fleet activity in the North Pacific is moving eastward and closer to Canadian waters.
Strategy	Review and modify fishing gear where possible to decrease bycatch of unintended stocks.	Apply a precautionary approach to stock management to mitigate knowledge gaps.	Focus on outcomes to be achieved rather than the process, allow for flexible models of engagement, and be inclusive.	A decision to support selective fisheries using enhancement and allocation of resources is necessary to implement, manage and mitigate risks arising from selective fisheries.	Protecting migratory stocks from IUU fisheries requires: fisheries legislation; regulatory frameworks; collaboration with domestic and international partners; surveillance and on-water enforcement.
Outcome	The use of alternative fishing gear has been particularly effective in reducing the incidence of stock of concern bycatch in other fisheries in the Maritimes Region.	Applying data-limited methods such as risk-assessment frameworks can help build understanding around key data gaps such as climate change impacts.	Meaningful engagement is necessary to ensure that all fisheries abide by common and sustainable harvest goals.	While greater selective fishery opportunities exist south of the border, they are still subject to fishery management decisions based on stock assessments and other external factors.	Strong international responses to IUU are multifaceted and include collaboration with all levels of domestic and international agencies to improve governance and enforcement capacity.

Annex D. Alternative financial tracking practices

Interviews with DFO staff within different DFO programs and regions (i.e., Pacific, Maritimes, Newfoundland and Labrador, SAP implementation Team) and other government departments (i.e., Parks Canada, Environment and Climate Change Canada) noted several financial tracking practices that could help inform DFO's challenges around accountability due to lack of clear financial tracking by species. See page 34 for further information on DFO's financial tracking of Pacific salmon.

Practice	A) Status Quo continuation of high-level costing exercises	B) Application of consistent departmental tracking methodologies	C) Use of a single reporting structure	D) Use of project codes to allocate costs by species directly in the SAP financial system
Description	Exercise done by a third-party from time to time, based on data extracted from the DFO Management Reporting System and the use of assumptions and estimates in consultation with Cost Centre managers.	Clearly determine areas of Pacific salmon management within the department that need to be tracked and set out a consistent departmental methodology for tracking them.	Integrated plan where all activities to be undertaken in support of Pacific salmon management are brought together under one program management and reporting structure.	Once a species is listed under the *Species at Risk Act*, a project code (Internal Order or Work Breakdown Structure) is created in the financial system to track the related expenditures. That same principle could be applied to Pacific salmon.
Benefits	More efficient than a manual tracking of time and costs on a continuous basis; mechanism that is also being used in other federal departments as proven to be the most effective for them; information will be more granular and easier to extract in SAP for future exercises.	Establishing clear methodologies for the tracking of Pacific salmon will ensure that resources are tracked in a manner that is consistent and based on clear guidelines for what the department is required to report on.	Clear financial tracking of all activities in support of Pacific salmon management, increased accountability and alignment of objectives; improved accuracy, completeness and timeliness of information through automation.	Could improve completeness, accuracy and timeliness of information in comparison with the high-level costing exercise that was done in the past; could help improve accountability.
Disadvantages	Heavy use of estimates and assumptions, which limits reliability and completeness of the information; not timely; limited comparability.	Decisions around the scope of the methodology will need to be made by the department. The department will also have to ensure consistent application of the methodology.	Significant change, increased risk of siloed management, including: creating competing priorities; duplication of efforts; compromising other species.	Burdensome exercise if done in all sectors and projects related to Pacific salmon; use of a project code for species is not possible for transactions where there is already another project code used; estimates are still required to fill in gaps and for salary costs.

Annex E. Grants and contributions in support of Pacific salmon

- The following list was compiled by the DFO evaluation team based on an analysis of the description of Transfer payments in the public accounts from 2016-2020 granted to recipients in the Pacific region, including British Columbia and Yukon, for activities in support of Pacific salmon. The table may not include an exhaustive list of all grants and contributions programming. Grants and contribution programs related to Pacific salmon are not presented by lever as they were not designed to directly address a specific management lever.

Grant and contribution programs	Ultimate Outcome under DFO's DRF	TPP Description
Aboriginal Fisheries Strategy **(AFS)** and Pacific Integrated Commercial Fisheries Initiative **(PICFI)**	Improved relationships with and outcomes for Indigenous people	• **AFS** facilitates the voluntary retirement of commercial licenses and the issuance of licenses to eligible Aboriginal groups. It also provides for the management of communal FSC fisheries within integrated management systems that support sustainability and conservation of fisheries resources. • **PICFI** supports aboriginal communities in becoming successful participants in commercial fisheries and aquaculture in Pacific Canada.
Aboriginal Aquatic Resource And Oceans Management Program **(AAROM)**	Improved relationships with and outcomes for Indigenous people	• **AAROM** supports Indigenous groups as they develop, grow and maintain aquatic resource and oceans management departments that can provide fisheries, habitat, science, and oceans related services along a watershed.
Coastal Restoration Fund **(CRF)**	Negative impacts on Canada's oceans and other aquatic ecosystems are minimized or avoided	• **CRF** addresses threats to marine habitats and species located on Canada's coasts and supports efforts that contribute to strategic planning as well as identifying and responding to restoration priorities. The CRF also engages Indigenous and community groups, as well as academics and non-profit organizations in undertaking: planning; restoration; capacity building; monitoring; and reporting activities to mitigate stressors affecting aquatic habitats and marine life.
Indigenous Habitat Participation programs **(IHPP)** & Canada Nature Fund for Aquatic Species and Aquatic Habitat **(CNF)**	Negative impacts on Canada's oceans and other aquatic ecosystems are minimized or avoided	• **IHPP** provides funding to support Indigenous communities to participate in the conservation and protection of fish and fish habitat. Contribution funding can also support engagement on Fish and Fish Habitat Protection Program initiatives, aquatic ecosystems capacity building within communities in the inland parts of the country and collaborative initiatives (such as data collection, monitoring) to support the conservation and protection of fish and fish habitat.
British Columbia Salmon Restoration and Innovation Fund **(BCSRIF)**	Canadian fisheries are sustainably managed	• **BCSRIF's** joint federal/provincial investments support the long-term environmental and economic sustainability of British Columbia's fish and seafood sector, with a focus on support for the protection and restoration of wild Pacific salmon.
Salmon Sub-Committee of the Yukon Fish and Wildlife Management Board **(YSSC)**	Collaborative management of salmon and their habitat in the Yukon area.	• The Yukon Salmon Sub-committee is a public advisory body originating from Yukon First Nation Final Agreement's that makes formal recommendations to the Minster of Fisheries and Oceans on matters related to salmon in Yukon.

Annex E. Grants and contributions in support of Pacific salmon

Grants and contributions programs	Ultimate Outcome under DFO's DRF	TPP Description
Salmon Enhancement Programming & Pacific Salmon Foundation **(SEP and PSF)** including T. Buck Suzuki Environmental Foundation **(TBSEF)** and Community Involvement Program **(CIP)**	Canadian fisheries are sustainably managed; and Improved relationships with and outcomes for Indigenous people	• **SEP's** Community Involvement Program is to enhance salmon and their habitat, support stock assessment, support rebuilding and/or maintenance of vulnerable stocks and their habitat through public education, stewardship, conservation and community engagement with long term, not-for-profit Stewardship and Indigenous recipients in British Columbia. • The **PSF** is an independent charitable organization that coordinates a Community Salmon Program (CSP) and supports programs or projects promoting awareness of, and involvement in, the conservation, restoration and enhancement of Pacific Salmonid stocks and habitat. • **TBSEF** contribution programming supports a) Public education and awareness and support for sustainable fisheries in BC; b) Sponsoring and participating in forums and conferences throughout BC on sustainable fisheries; c) Participating in government policy dialogues, advisory and planning processes linked to sustainable fisheries; d) Building and maintaining effective communications and collaborations with the commercial fishing sector in BC; e) Building collaborative alliances with Harbour Authorities, municipalities and other organizations mobilized to protect fish habitat and marine ecosystems in BC; and f) Developing tools and techniques to promote sustainable fishing practices.
Grant to Pacific Salmon Endowment Fund **(PSEF)**	NA	NA
Contribution in Support of Ecosystems and Oceans Science	Scientific information on fisheries , oceans and other aquatic ecosystems is available to inform management decision	• To encourage scientific research and related scientific activities (e.g., data collection, integration, monitoring, and communication, including communication via conferences and symposia) and dissemination of scientific knowledge.
Grants and contributions to support Aboriginal Reconciliation Agreements	Enhanced relationships with, involvement of, and outcomes for Indigenous people	• To provide a foundation for the development and implementation of Indigenous Reconciliation Agreements signed by an Indigenous group or aggregate. To support Indigenous groups self-determination including, but not limited to, building internal capacity, allowing Indigenous groups to assert control 2 over their economic development, and allowing for long-term planning with respect to fisheries and marine management.

Annex F. Management Action Plan (MAP)

Evaluation of DFO's activities in support of Pacific Salmon (project #96524)
PMEC Date: January 2022
MAP Completion Target Date: December 2024
Lead ADM/DC: Regional Director General, Pacific Region; Executive Head, Pacific Salmon Transformation

Recommendation 1: FALL 2022
Recommendation: Develop a strategic direction and vision for Pacific salmon It is recommended that the Regional Director General, Pacific Region and the Executive Head Pacific Salmon Strategy Transformation, in collaboration with the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy and the Assistant Deputy Minister Ecosystems and Oceans Science create a clearly defined and unified strategic direction and vision for the management of Pacific salmon that can be implemented across the department and communicated to internal and external stakeholders. **Rationale:** The need for an integrated direction and vision for Pacific salmon was raised throughout this evaluation as necessary to bring together all areas of the department that have responsibilities for activities in support of Pacific salmon and is a foundational step in ensuring a unified approach to the delivery of these activities. The establishment of a strategic direction and vision will assist in providing unified guidance throughout the department on the principles underlying Pacific salmon management.
Management Response
The program agrees with this recommendation and recognizes that developing a cohesive and integrated direction and vision for the management of pacific Salmon is a critical element in achieving the goal of stemming historic declines in key Pacific salmon stocks and rebuilding the species to a sustainable level over the long term. As per the recommendation, the long-term persistence of Pacific salmon stock declines demands more integrated solutions and actions beyond the current capacity of Fisheries and Oceans Canada (DFO), to stem Pacific salmon declines and mitigate the impacts on harvesters. The new Pacific Salmon Strategy Initiative (PSSI) is well positioned to lead the way on this front as it is aiming to transform the management of Pacific salmon. Clearly defining a unified strategic direction and vision will be essential to enabling this transformation into a coordinated long-term response that will address the multiple drivers of stock declines. Leveraging the PSSI Secretariat, expected to launch in December 2021, DFO will advance internal integration and also build on and leverage strong partnerships with First Nations and external stakeholders, implementing new engagement and consultation mechanisms to develop a consistent strategic vision and direction for Pacific salmon, salmon habitat, and ecosystems.

Annex F: Management Action Plan (MAP)

Under the Executive Head of Pacific Salmon Strategy Transformation, the PSSI Secretariat will collaborate across the department and with external partners to develop consistent departmental objectives and priorities for Pacific salmon. In collaboration with the Senior Assistant Deputy Minister of Fisheries and Harbour Management, the Assistant Deputy Minister of Aquatic Ecosystems, the Senior Assistant Deputy Minister of Strategic Policy, and the Assistant Deputy Minister of Ecosystems and Oceans Science, the PSSI Secretariat will leverage governance forums and workshops to develop a clear and integrated direction and vision for managing Pacific salmon. The strategic direction and vision will be consistent with existing national policies and commitments for how aquatic resources are managed.

PSSI envisions that the following elements would be included in the strategic direction and vision:

1. Clear and consistent guidance for the management of Pacific salmon for all three management levers (I.e. harvest, habitat, and hatchery)
2. Clear and consistent principles, aligned to measurable results and performance indicators from the Performance Measurement Strategy (Recommendation 4) for PSSI and Pacific salmon writ large.
   - This includes the five year and 15 year ultimate outcomes (below) which will be evaluated using one specific unit of assessment, stock management units (SMUs), for all species of Pacific salmon
     - Five year – per cent of salmon stocks in the critical zone with an approved and implemented rebuilding/conservation plan.
     - 15 year – per cent of stocks in cautious or healthy zones

Communicating this vision is another critical factor in enabling consistent and successful transformation for the management of Pacific salmon. It is expected that the draft vision will be developed by January 2022, so it can be shared for external engagement over March 2022. The final strategic direction and vision for Pacific salmon will be completed, with consideration of external input received, by end of the summer of 2022. The performance measurement strategy (recommendation 4) will subsequently be developed in alignment with this strategic direction and vision.

Annex F: Management Action Plan (MAP)

Link to larger program or departmental results (if applicable)			
• Budget 2021 announcement on "Preserving Wild Pacific Salmon" • Contributes to DFO's Core Responsibilities for "Fisheries" and "Aquatic Ecosystems"			
MAP Results Statement *Result to be achieved in response to the recommendation*	**MAP Milestones** *Critical accomplishments to ensure achievement of result for PMEC's approval*	**Completion Date** *Month, Year*	**Director General Responsible**
Strategic direction and vision are developed for the management of Pacific salmon	PSSI Implementation Secretariat launched	December 2021	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region
	Draft strategic direction/vision developed	January 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • DG, Strategic Priorities and Policy - SP • DG, Fisheries Resource Management - FHM
	Engagement on draft strategic direction/ vision	March 2022	• Executive Head PSSI (lead) • RDG, Pacific
	Final Strategic direction/vision document is produced	June 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • DG, Strategic Priorities and Policy - SP • DG, Fisheries Resource Management - FHM
Strategic direction and vision is communicated across the department and to partners	Strategic direction/vision is communicated to internal and external partners through a series of engagements/workshops	September 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region

Annex F. Management Action Plan (MAP)

Recommendation 2: OCTOBER 2022
Recommendation: Implement a coordinated approach for transfer payments that is aligned with the strategic direction and vision for Pacific salmon It is recommended that the Regional Director General, Pacific Region, in collaboration with the Executive Head, Pacific Salmon Strategy Transformation, the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy, the Assistant Deputy Minister Ecosystems and Oceans Science and the Chief Financial Officer implement a coordinated approach for transfer payment programs supporting Pacific salmon that is aligned with the departmental strategic direction and vision. **Rationale:** An integrated approach is needed to bring together all the different areas of the department that are involved in the delivery of Pacific salmon grant and contribution transfer payment programs. The evaluation identified a need to be more strategic in the prioritization of grants and contributions, which are currently proposal driven. A coordinated approach for transfer payments supporting Pacific salmon would ensure that projects are clearly linked to the departmental strategic direction and vision. It would also ensure that outcomes from those transfer payments can be linked to results for Pacific salmon.
Management Response
The Program agrees with this recommendation and recognizes that it will be critical to implement a coordinated approach for transfer payments that is aligned with the strategic direction and vision for Pacific Salmon. This will be essential for tracking resource allocations and enabling a more strategic and responsive approach to managing Pacific salmon. According to the Pacific Salmon Evaluation, some G&C programs contribute indirectly to Pacific salmon but they are not tracked in manner that allows for targeted reporting related to Pacific salmon. Instead, they are tracked at a program level which makes it is difficult for the programs to isolate data related to particular species of fish, in this case Pacific salmon. Further, this also makes it difficult to identify the total resources being allocated to external groups for Pacific salmon-related initiatives. DFO, through PSSI implementation, will build on existing efforts across both the Pacific Region and the department to implement a coordinated, consistent and integrated approach for PSSI transfer payment programs, in the form of a PSSI G&C Delivery Strategy. This strategy will aim to complement existing efforts and help serve as a foundation for coordinating all Pacific salmon transfer payment programs over the longer term.

Annex F: Management Action Plan (MAP)

Improvements at both the regional and enterprise-wide level for G&C management are being planned, delivered and tracked against regional and national multi-year workplans lead by the G&C Coordination Unit in Pacific Region and the national G&C Center of Expertise within the CFO sector. Pacific staff from all G&C programs and the G&C COE are supporting both regional and national efforts. The PSSI approach will be aligned with the to-be-established strategic direction and vision for Pacific salmon and help to realize Pacific salmon goals, as per the performance measurement strategy.

As part of these collective efforts, the PSSI Secretariat will build a comprehensive PSSI G&C Delivery Strategy to enable a full understanding of the transfer payments landscape related to PSSI. In the shorter-term, a reporting approach for PSSI-related transfer programs will be developed and implemented, while longer-term needs are identified as part of the national G&C system review that will ultimately result in the development of an enterprise-wide systems solution for G&C. When implemented, the PSSI G&C Delivery strategy will support the integration of information on all PSSI transfer payment program expenditures, to clearly show the funding distribution across all programs and areas.

As stated above, the PSSI Secretariat will work with all programs involved to develop a PSSI G&C Delivery Strategy, which will include identifying a governance mechanism or process for the coordination of all transfer payment programs related to PSSI, to ensure that resource allocation decisions for G&C programs are well-informed and clearly linked to overarching operational and strategic priorities. This work will be done in alignment with and support the broader Pacific Region G&C coordination efforts. The development of this PSSI G&C Strategy will require extensive engagement with the implicated teams in both the Pacific region and in NHQ. This will include a priority setting exercise in order to guide future transfer payment processes and funding decisions and ensure DFO will be able to report on G&Cs related to PSSI.

The key components of the Strategy are also expected to include a governance approach for strategic departmental decisions on PSSI transfer payments, alignment of priorities, and documentation of clear roles and responsibilities for allocating G&C resources across programs. This approach will set up a solid foundation for longer term efforts to integrate and coordinate transfer payment programs for all Pacific salmon related G&Cs within the context of broader regional and national approaches.

Over the long term, the PSSI Secretariat will also undertake consultation and analysis with the DFO programs involved, to identify and adopt an effective approach for the financial tracking of the costs and expenditures related to Pacific salmon transfer payment programs that are not included within the PSSI funding envelope, as currently these are embedded within existing program costs and must be estimated. This may include or result in a review of expenditures every five years (like what was done in 2017).

Annex F: Management Action Plan (MAP)

Link to larger program or departmental results (if applicable)			
• Budget 2021 announcement on "Preserving Wild Pacific Salmon" • Contributes to DFO's Core Responsibilities for "Fisheries" and "Aquatic Ecosystems"			
MAP Results Statement *Result to be achieved in response to the recommendation*	**MAP Milestones** *Critical accomplishments to ensure achievement of result for PMEC's approval*	**Completion Date** *Month, Year*	**Director General Responsible**
Coordinated approach for PSSI transfer payment programs that is aligned with the strategic direction and vision for Pacific salmon is implemented	Initial mapping of all PSSI G&C programs that outlines program leads, terms and conditions, transfer payment program	December 2021	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • DG, Budget Planning and Financial Management - CFO
	PSSI G&C Delivery Strategy is drafted	March 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • DG, Budget Planning and Financial Management - CFO
Coordinated approach for all Pacific salmon transfer payment programs that is aligned with the strategic direction and vision for Pacific salmon is implemented	Engagement to determine a longer-term approach for coordinating Pacific salmon transfer payment programs (beyond PSSI) is initiated	October 2022	• RDG, Pacific Region (lead) • Executive Head PSS Transformation • DG, Budget Planning and Financial Management - CFO

Annex F. Management Action Plan (MAP)

Recommendation 3: APRIL 2023
Recommendation: Implement tools and methodologies to track resources in support of Pacific salmon It is recommended that the Regional Director General, Pacific Region, in collaboration with the Executive Head, Pacific Salmon Strategy Transformation, the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy, the Assistant Deputy Minister Ecosystems and Oceans Science and the Chief Financial Officer leverage internal tools and methodologies to improve the financial tracking of activities related to the management of Pacific salmon. **Rationale**: The evaluation found that financial information related to Pacific salmon species and DFO management levers is not readily available within the department. Identifying accountabilities linked to financial resources is challenging. Improvements to the tracking of financial, human and materiel resources related to Pacific salmon can help identify accountabilities for the allocation of resources within the department. This will in turn improve the performance data that is available to inform decision making.
Management Response
The program agrees with this recommendation and recognizes the importance of establishing a robust and streamlined tracking strategy for financial, human and materiel resources, to support: (1) the effective allocation of resources, (2) clear accountabilities, (3) flexibility to transfer these resources within DFO, and (4) improved performance data to inform decision-making for the management of Pacific salmon. DFO will establish a financial tracking strategy through the PSSI to provide a more granular line of sight on the resource allocations devoted to Pacific salmon activities and initiatives, and to enable the real-time transfer of financial allocations between initiatives based on performance and dynamic priorities. • The strategy will be aligned with existing departmental processes, including the Annual Reference Level Update (ARLU) and the Financial Situation Report (FSR). • The strategy will be supported by DFO's migration to the new SAP S/4HANA, thereby aligning with the new TBS (Treasury Board Secretariat) standard for GC (Government of Canada) financial management systems. DFO introduced the new SAP system in Spring 2021 and is commencing the design of the detailed implementation plan in Fall 2021. The new SAP system is expected to be fully implemented across DFO within the next three years. • The strategy will also support the annual reporting to Cabinet by DFO on Pacific salmon.

Annex F: Management Action Plan (MAP)

This strategy will include the following key components:

1. DFO will confirm a notional approach for the preliminary allocations for Pacific salmon activities and initiatives under the PSSI funding envelope ($647M over five years).
2. DFO will ensure the financial coding of all PSSI funding by pillar, initiative, sub-initiative, and their designated funds/cost centres.
3. This information will be fully accessible through the new SAP system once implemented, which will permit granular and dynamic reports to support clearer accountabilities by activity/initiative and improve performance data and decision-making.
4. Once implemented, the new SAP system will provide resource breakdowns based on the financial coding structure: purpose (functional area), fund (source of money), general ledger account (type of expenditure), funds/cost centre (who is spending), funded program (for monitoring initiatives), and work-breakdown structure/WBS/internal order (for money spent on a project). This resource information structure will permit the continued tracking in real-time of PSSI allocations, commitments, and expenditures.
5. PSSI Secretariat will determine and implement the appropriate requirements for monitoring and periodic reporting, utilizing the built-in capabilities and functionalities of the new SAP system.
6. In the context of setting strategic and operational management priorities for resource allocation, the PSSI secretariat will implement governance strategies for the review of financial monitoring and reporting results and will support the implementation of decisions for resource allocation/reallocation.

Over the long term, the PSSI Secretariat will also undertake consultation and analysis with the DFO programs involved, to identify and adopt an effective approach for the financial tracking of the costs and expenditures related to Pacific salmon that are not included within the PSSI funding envelope, as currently these are embedded within existing program costs and must be estimated. This may include a review of expenditures every five years (similar to what was done in 2017). The solution for this may be in the SAP system, but if it is determined not to be feasible within the constraints of SAP, then DFO will need to find complementary tools and/or methodologies that can enable the department to track all resources in support of Pacific salmon to meet reporting requirements.

Link to larger program or departmental results (if applicable)

- Budget 2021 announcement on “Preserving Wild Pacific Salmon”
- Contributes to DFO’s Core Responsibilities for “Fisheries” and “Aquatic Ecosystems”

Annex F: Management Action Plan (MAP)

MAP Results Statement *Result to be achieved in response to the recommendation*	**MAP Milestones** *Critical accomplishments to ensure achievement of result for PMEC's approval*	**Completion Date** *Month, Year*	**Director General Responsible**
Tools and methodologies are developed and implemented to track resources in support of PSSI	Establish an overall plan to track resources in support of PSSI activities	December 2021	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • DG, Budget Planning and Financial Management - CFO
	Financial tracking framework for PSSI funding, with clear processes aligned with the implementation of new SAP system.	September 2022	• DG, Budget Planning and Financial Management - CFO (lead) • Executive Head PSSI • RDG, Pacific
Tools and methodologies are developed and implemented to track resources in support of Pacific salmon	Additional resource tracking tools and methodologies developed to complement SAP capabilities (if required)	April 2023	• DG, Budget Planning and Financial Management - CFO (lead) • Executive Head PSSI • RDG, Pacific
	Financial tracking framework for non-PSSI funding for Pacific Salmon, with clear processes aligned with the implementation of new SAP system is implemented	April 2023	• DG, Budget Planning and Financial Management - CFO (lead) • Executive Head PSSI • RDG, Pacific Region

Annex F. Management Action Plan (MAP)

Recommendation 4: MAY 2023
Recommendation: Implement a performance measurement strategy for activities in support of Pacific salmon It is recommended that the Regional Director General, Pacific Region and the Head of Performance Measurement, in collaboration with the Executive Head, Pacific Salmon Strategy Transformation, the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy and the Assistant Deputy Minister Ecosystems and Oceans Science develop and implement a performance measurement strategy for activities in support of Pacific salmon that is consistent with the department's strategic direction and vision for Pacific salmon and that clearly identifies the department's expected results. **Rationale**: It is acknowledged that there are a number of hindering external factors which affect the department's ability to achieve results for Pacific salmon, some of which are out of DFO's control. The need for a robust performance measurement strategy was identified throughout this evaluation as necessary to provide the department with targets and data to clearly articulate results for Pacific salmon despite the existence of known external factors.
Management Response
The program agrees with the recommendation and recognizes the importance of developing a comprehensive approach to measuring the performance of activities in support of Pacific salmon that is consistent with the department's strategic direction and vision (as per Recommendation 1). DFO, through the PSSI, is in the process of establishing a Performance Measurement (PM) Strategy which will align with the department's strategic direction and vision. The Strategy will include a logic model and clear results narrative for PSSI delivery. It will also include a broad inventory of outcomes, milestones and performance indicators that span the activities and initiatives related to Pacific salmon through the PSSI. As part of the PM Strategy, PSSI will seek to establish effective performance measure(s) that are consistent with the long-term vision for Pacific salmon (as per recommendation #1) and enable DFO to measure progress towards "healthy and abundant" Pacific salmon stocks.

Annex F: Management Action Plan (MAP)

It is important to note that Pacific salmon have a four-to-five-year life cycle, and that it will require investments through multiple cycles (up to 10-15 years) for signs of recovery. The PSSI initiatives to be actioned within the five-year span of this investment set the foundation for the longer-term actions required to support rebuilding. To measure progress on these foundational efforts, the department has proposed that the ultimate outcome to be achieved is "priority pacific salmon populations are conserved and protected through targeted action in collaboration with others". Two indicators have also been proposed to measure our program towards that ultimate outcome, and that link the 5-year plan with the long term (15+ years) vision for Pacific salmon:

- *Five year* – per cent of salmon stocks in the critical zone with an approved and implemented rebuilding/conservation plan
- *15 year* – per cent of stocks in cautious or healthy zones

On an annual basis, PSSI will conduct annual reporting via the departmental performance reporting and planning cycle. The outcomes to be reported on will link to each pillar of the PSSI and will be evaluated based on multiple performance indicators. In addition, the PSSI Secretariat will provide annual updates to Cabinet, as requested.

PSSI will build on the PSSI Performance Measurement (PM) Strategy as implementation evolves, and work in collaboration with key partners internally and externally to build the broader Pacific salmon results/PM story. The goal will be to aim for an overall Pacific Salmon PM Strategy, to better articulate and capture all DFO Pacific salmon activities.

Link to larger program or departmental results (if applicable)

- Budget 2021 announcement on "Preserving Wild Pacific Salmon"
- Contributes to DFO's Core Responsibilities for "Fisheries" and "Aquatic Ecosystems"

Annex F: Management Action Plan (MAP)

MAP Results Statement *Result to be achieved in response to the recommendation*	**MAP Milestones** *Critical accomplishments to ensure achievement of result for PMEC's approval*	**Completion Date** *Month, Year*	**Director General Responsible**
A performance measurement strategy is implemented for PSSI	PSSI Logic Model developed	March 2022	• Executive Head, PSS Transformation (lead) • DG, Planning Results and Evaluation - CFO
	Internal Engagement completed	December 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region
PSSI PM Strategy is integrated into Pacific salmon results overall	Draft Pacific salmon Performance Measurement Strategy is completed	December 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • DG, Planning Results and Evaluation - CFO • DG, Strategic Priorities and Policy - SP
	Pacific salmon Performance Measurement Strategy is implemented	May 2023	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • DG, Planning Results and Evaluation - CFO • DG, Strategic Priorities and Policy - SP

Annex F. Management Action Plan (MAP)

Recommendation 5: MARCH 2022
Recommendation 5: Clearly define the governance framework for departmental activities in support of Pacific Salmon It is recommended that the Executive Head, Pacific Salmon Strategy Transformation, in collaboration with the Regional Director General, Pacific Region, the Senior Assistant Deputy Minister Fisheries and Harbour Management, the Assistant Deputy Minister Aquatic Ecosystems, the Senior Assistant Deputy Minister Strategic Policy and the Assistant Deputy Minister Ecosystems and Oceans Science implement a clearly defined governance framework for activities in support of Pacific salmon that is consistent with the department's strategic direction and vision for Pacific salmon and that clearly identifies roles and responsibilities across DFO programs at the regional and national level. **Rationale**: It is acknowledged that governance frameworks lack clarity within the region and nationally across the department. Roles and responsibilities for Pacific salmon are well defined within DFO's program siloes but are not clear across other areas of the department due, in part, to unclear accountabilities associated with a lack of clear direction and vision for the management of Pacific salmon. The need for a clearly defined governance framework was identified throughout the evaluation to establish a holistic and integrated national and regional approach for the management of Pacific salmon.
Management Response
The program agrees with the recommendation and recognizes that clearly defining a governance framework for all departmental activities in support of Pacific salmon is critical to facilitate collaborative decision making on PSSI activities and on Pacific salmon writ large. Further, it is imperative to have strong and clear governance devoted to pacific salmon in order to successfully execute on the recommendations set out in the evaluation on Pacific Salmon. The Pacific Salmon Strategy Initiative (PSSI) is a transformational initiative intended to stem the decline of key Pacific salmon stocks and to assist the rebuilding of stocks to sustainable levels. While the operational management and program delivery for Pacific salmon to date has largely been led by the Pacific region, various sectors and branches throughout the Department have policy and program responsibilities related to Pacific Salmon from a national perspective. Given this, a review will be undertaken of whether existing departmental governance can meet the objective of ensuring the implementation of the PSSI is undertaken in an integrated and coordinated way across the entire Department. Should gaps be identified, adjustments to departmental governance will be proposed to the Departmental Management Committee (DMC).

Annex F: Management Action Plan (MAP)

Principles:

- The management of Pacific Salmon is a departmental priority and requires a coordinated effort by all those involved.
- Existing governance structures are to be utilized where possible.
- Should additional governance be required, whether regular or ad hoc, it should identify the specific governance gap it is addressing and align with roles & responsibilities, and members should be those with clear accountabilities.
- Any new formal committees or working groups should have terms of reference that define the gap in existing governance that it is addressing and outline the mandate/scope, membership, accountabilities and how it supports implementation of Pacific salmon activities.

The objective is that the departmental governance will support integrated PSSI implementation and management responses to key recommendations of the recent departmental evaluation on Pacific Salmon activities.

Strategic advice will also be sought from ADMs and RDG with direct accountabilities, on an ad-hoc basis, and informally to inform priority-setting and implementation, as and when needed. Formal decision making will still be sought from existing ADM level committees for the Department (Departmental Management Committee, and the Departmental Policy Committee).

Link to larger program or departmental results (if applicable)

- Budget 2021 announcement on “Preserving Wild Pacific Salmon”
- Contributes to DFO’s Core Responsibilities for “Fisheries” and “Aquatic Ecosystems”

Annex F: Management Action Plan (MAP)

MAP Results Statement *Result to be achieved in response to the recommendation*	**MAP Milestones** *Critical accomplishments to ensure achievement of result for PMEC's approval*	**Completion Date** *Month, Year*	**Director General Responsible**
A clearly defined governance framework for activities in support of Pacific salmon is established	Bring to DMC for discussion an analysis of the existing governance framework, which identifies whether existing structures can be leveraged more fully or if new Committees are required in order to ensure there is an effective governance framework for the management of Pacific Salmon.	January 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • Director, Governance and Ministerial Correspondence Unit
	Complete Terms of Reference for any new governance committee, should they be required based on the review above. These terms of reference should clearly define the gap that the new committee is addressing and how the new committee is complimentary to existing departmental operations governance, including the Program and Operations Committee (POC).	February 2022	• Executive Head, PSS Transformation (lead) • RDG Pacific Region • Director, Governance and Ministerial Correspondence Unit • Co-chairs Program Operations Committee
	Complete a governance framework / interdependencies placemat.	February 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region
	If required, new governance committee is launched and integrated with existing governance (where appropriate)	March 2022	• Executive Head, PSS Transformation (lead) • RDG, Pacific Region • Director, Governance and Ministerial Correspondence Unit